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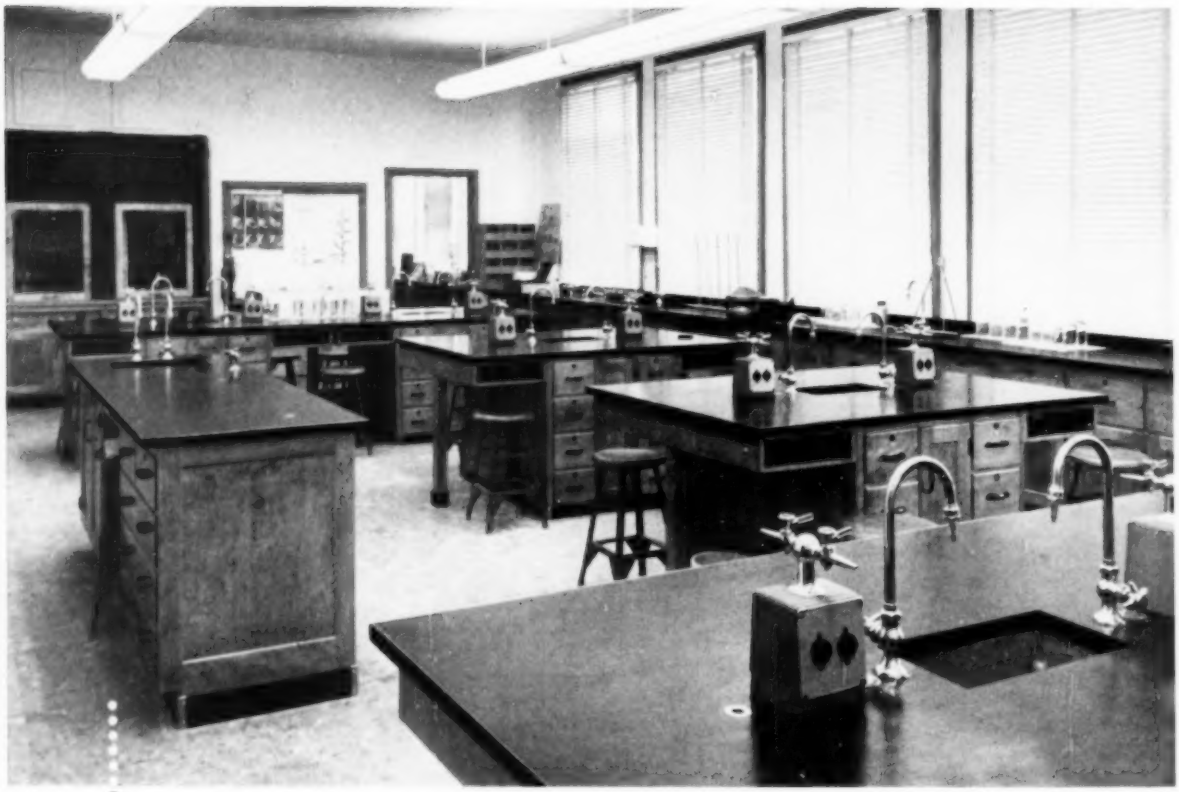
SEPTEMBER 1953: Congressional Investigations ★ Census of College Facilities ★ Recruiting Executive Personnel ★ Campus and Carillon ★ Maintenance Administration ★ Storeroom Control



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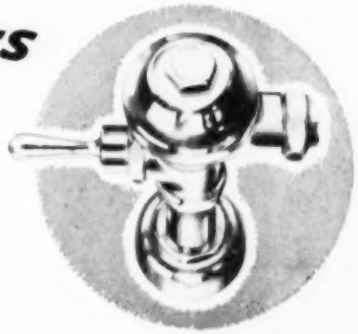

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Among the Authors

Robert F. Moore

ROBERT F. MOORE, general manager of Richardson, Bellows, Henry & Company, management consulting organization of New York City, has for many years devoted attention to personnel problems as they relate both to industry and universities. He was long a member of the Columbia University staff, first in 1931 as assistant director of athletics and then in 1936 as director of the placement bureau. In 1944 he became director of the personnel office, which he organized. In World War II Mr. Moore served at the Naval Ordnance Laboratory in Washington, D.C., as field technical recruiting representative, later going to the division of war research at Columbia University, where he organized the personnel department of the Columbia group at the Manhattan Project. He has written extensively in the personnel field and his recent book, "How Am I Doing?" a self-appraisal for the aspiring executive, was the October 1952 selection of the Executive Book Club. On page 26, Mr. Moore discusses the ever-present problem as to whether colleges can compete with industry in hiring top administrative talent.

Robert R. Mall

ROBERT R. MALL, chief cashier at Carnegie Institute of Technology in Pittsburgh, discusses on page 29 the principles of a pay-as-you-go plan for students who are handling their educational expenses while enrolled in college. Mr. Mall has been in his present position for the last six years and was formerly associated with T.W.A. in Pittsburgh. During World War II he was a naval lieutenant for three years, serving in the Russell Islands and the Marianas in the South Pacific. He enjoys gardening and bowling and is much interested in the underprivileged children's project of his local Kiwanis Club.

Arthur L. Bigelow

ARTHUR LYNDS BIGELOW, professor in the department of engineering at Princeton University, has had a long and distinguished career in music. On page 31 he describes the technical details of the electronic carillons and their utilization as a facility of a college or university campus. He has been bellmaster of Princeton University since 1941. He was concert artist of the Library Tower at the University of Louvain, Belgium, from 1933 to 1940. He also retains appointment as bellmaster of the town of Louvain in Belgium, a post he has held since 1935. Professor Bigelow was consultant to the U.S. Treasury for the importation of the 58 Liberty Bells brought to this country in 1950, and was responsible for the design and supervision of the manufacture of these bells in France.

Percy J. Baker

PERCY J. BAKER, internal auditor of Mississippi State College, discusses on page 49 the simplified storeroom control program now in effect at his institution. A result of the installation of his system of storeroom control is reduced loss and, in consequence, less extensive record keeping. He has been internal auditor of Mississippi State College for the last three years. Prior to that appointment, he was with the army air forces for a period of four years.

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Questions and Answers

Charging for Services

Question: What are the advantages or disadvantages of charging departments for service activities such as mimeographing, telephone service, heat, light and power in lieu of no charges and having the administration absorb such charges? — J.A.M., Calif.

ANSWER: There are both advantages and disadvantages in charging departments for necessary services such as mimeographing, telephone service, heat, light and power. Charges for such services applied against departments or projects having income from outside sources or operating on a self-supporting basis may be advantageous since they will result in additional general fund income to the institution. Charges for services applied against academic departments already dependent upon general institutional income for support can be justified only on the basis of control of such costs and allocation of costs for management purposes. If costs for these services can be properly controlled to preclude excessive use by individual academic departments, there seems to be little value in establishing charges.

In a number of instances exceedingly complex systems of interdepartmental charges and credit have been established. This has resulted in substantial increases in accounting costs with no corresponding increase in general fund income. In these cases the institution spends its money for bookkeeping costs involved in transferring funds from one pocket to another. It may be wise to assess charges to academic departments for a limited period in order to establish cost patterns. Thereafter such charges may be abandoned if appropriate controls can be effected.—RAYMOND KETTLER, *controller, Purdue University.*

Automobile Trades

Question: On what basis are university owned automobiles in a fleet traded or replaced: (a) mileage basis or (b) age basis? If on the former, what mileage; if on the latter, what age?—A.B., Calif.

ANSWER: As a general policy, our university owned automobiles are replaced after 45,000 miles of travel, or after three years of use.—C. S. HAVENS, *director of physical plant, University of Illinois.*

Fingerprinting Students

Question: To what extent are colleges fingerprinting students for purposes of identification, detecting thieves, and so forth? Is the practice considered of sufficient value to warrant the time and expense?—O.T., Ind.

ANSWER: This practice is prevalent in such institutions as Alcatraz, Leavenworth, Sing Sing, Joliet and the like. It is more suitable to the needs of such institutions and to their clientele. Colleges that pride themselves on the American tradition of academic freedom would scarcely be consistent in applying such methods, which are reminiscent of the Gestapo, to students in whom the faculties are attempting to instill the principles of democracy. My personal reaction to this intrusion on the rights of the individual is so virulent that I am sure if as a student this practice had been applied to me I would have transferred to another college. This seems to me one of the quickest and easiest ways to induce poor relationship between the administration and the student body.

Aside from the principle involved, I doubt that the value to the administration for purposes of identification in detecting thieves and the like warrants the time and effort and expense. I have no statistics at hand, but my guess is that few of the colleges in this country have adopted this practice. The University of Minnesota formerly used fingerprints to identify purchasers of season tickets but has gone back to use of signatures for that purpose. —BRUCE POLLOCK, *business manager, Carleton College.*

If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.

Job Evaluation Programs

Question: What experience have institutions had with formal job evaluation plans for nonacademic employes?—D.B.T., Mo.

ANSWER: In a survey of employe personnel practices conducted by Dr. Fred C. Ford for the College and University Personnel Association in 1951, reports were received from 81 institutions believed representing a cross section of institutions of higher education in the United States and being, for the most part, those which have developed some sort of specific personnel administration program within their organization. Of these, 45 reported having used some type of job evaluation program; 11 had used the point method of determining relations; 9 had used the method of general rank comparison, and 25 had used the factor comparison method.

In most situations, general pay scales are set rather definitely in relationship to those with which the institution must compete in the local community. In a few cases, however, the "prevailing rate" or "prevailing practice" method is not applicable; in such cases, the job evaluation procedure can be very helpful. It is also of very real value in checking the entire wage and salary structure, as it actually exists, against a theoretically correct relationship.

If the writer of this question wishes a detailed report on a program developed and used with some success at the University of Illinois, I shall be glad to send it to him upon receipt of his name and address.—DONALD E. DICKASON, *director of nonacademic personnel, University of Illinois.*

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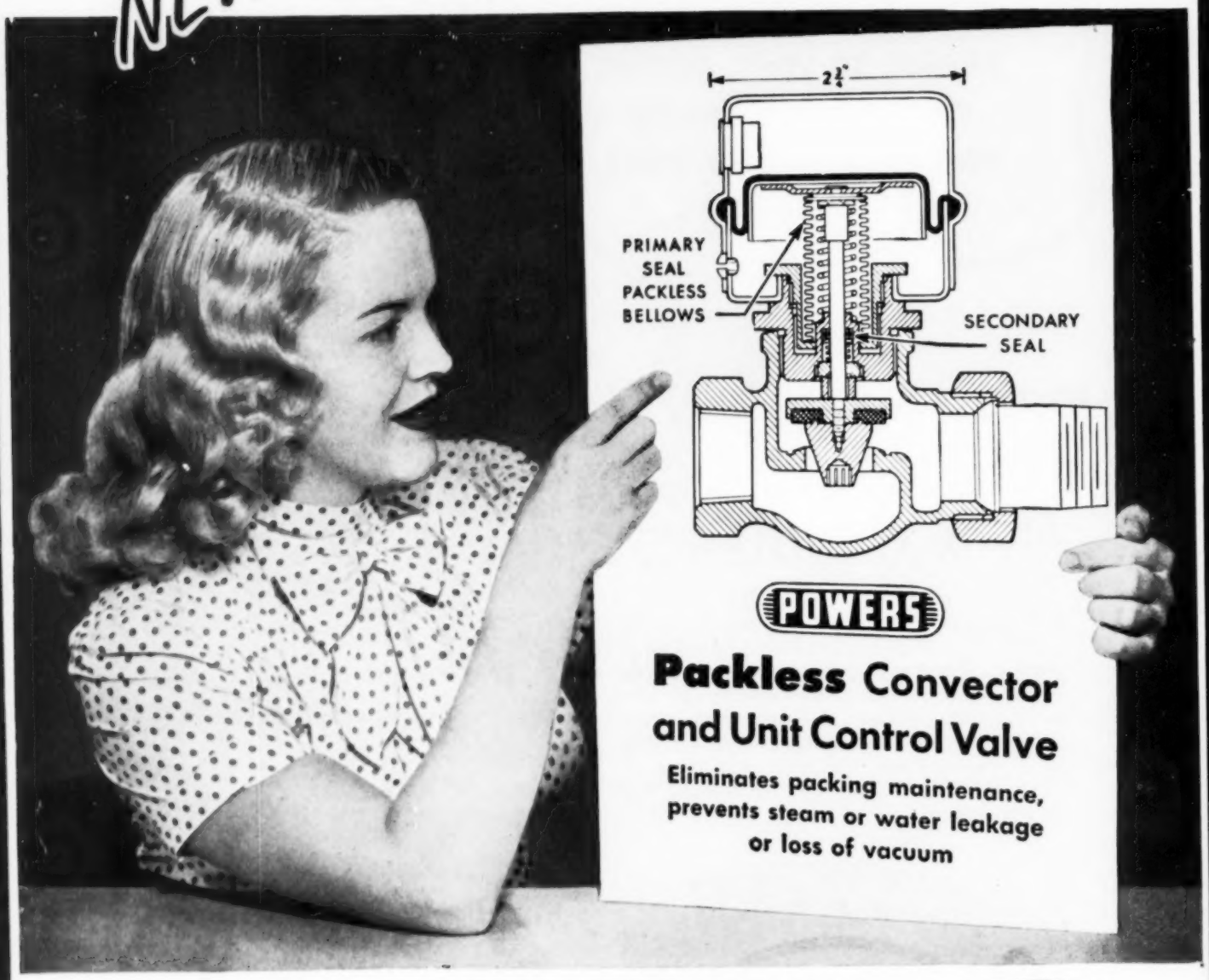

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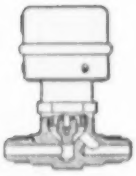

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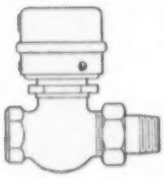

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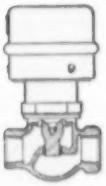

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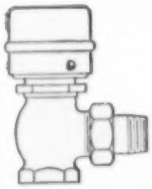

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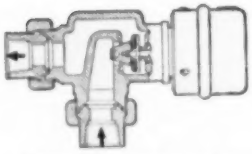

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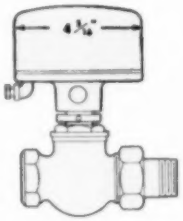

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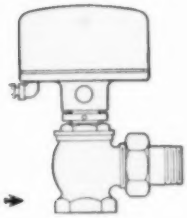

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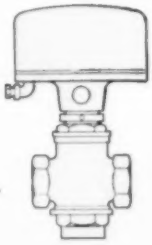

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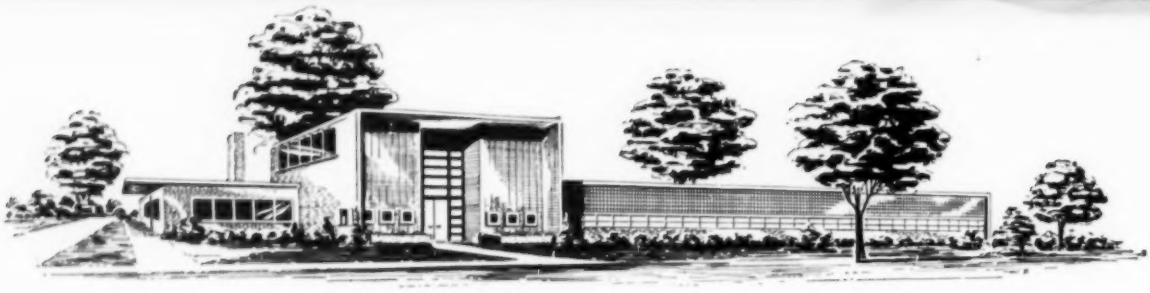

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First Toplite installation leads new trend in classroom design

New school uses Kimble Toplite Roof Panels and Insulux Light-Directing Glass Block in side walls to give better, more evenly lit rooms.

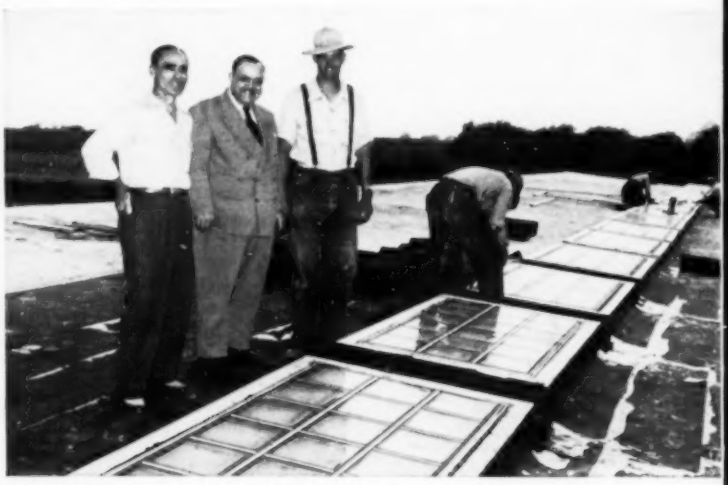
There was a time when lighting experts worked to increase the amount of illumination in rooms because they felt the more light, the better the seeing conditions.

However, continuing research by Kimble Glass Company at its Daylighting Laboratories has proved it is *quality*, not *quantity*, of daylight that creates good seeing. Steady, even lighting without glare and harsh contrasts creates the ideal seeing environment.

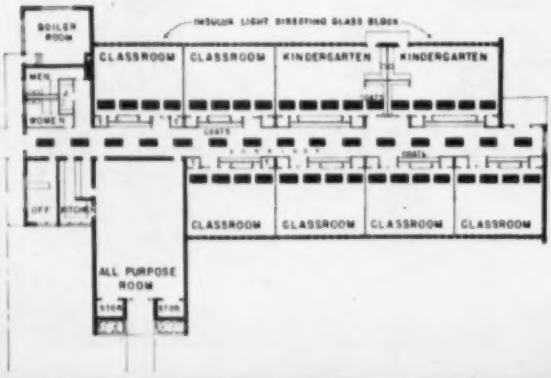
With this new combination of Insulux fenestration and Kimble Toplite it is now possible to bring adequate daylight into any classroom regardless of depth, and to create illumination levels that fall within those requirements established by I.E.S. Size and arrangement of the Toplite panels are determined by room dimensions.

New Kimble Toplite Roof panels are designed to transmit low Autumn and Winter sun as well as cool northern light all day long . . . but . . . also repel the hot, glaring light of a mid-day summer sun. The result is soft daylight throughout the room all day.

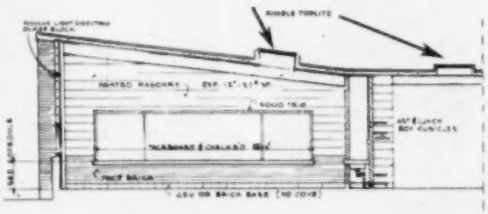
Kimble Toplite Roof Panels are factory-fabricated. In their sturdy, individual crates, they arrive on the site ready to install.

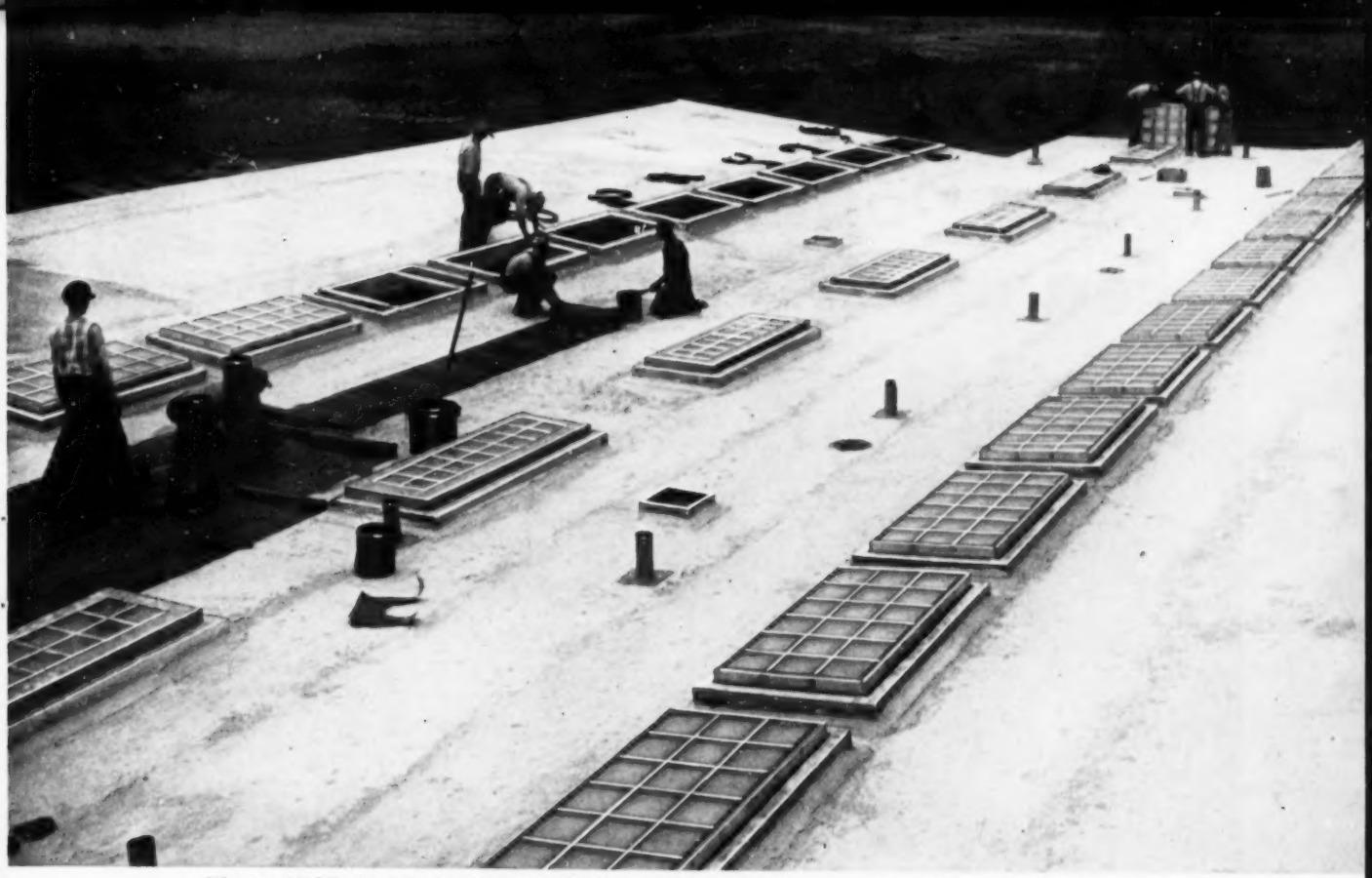


Earl Van Sickle, Supt. of Schools, Louis C. Kingscott, Architect, and Henry Vander Veen, building contractor (l. to r.), inspect the installation.

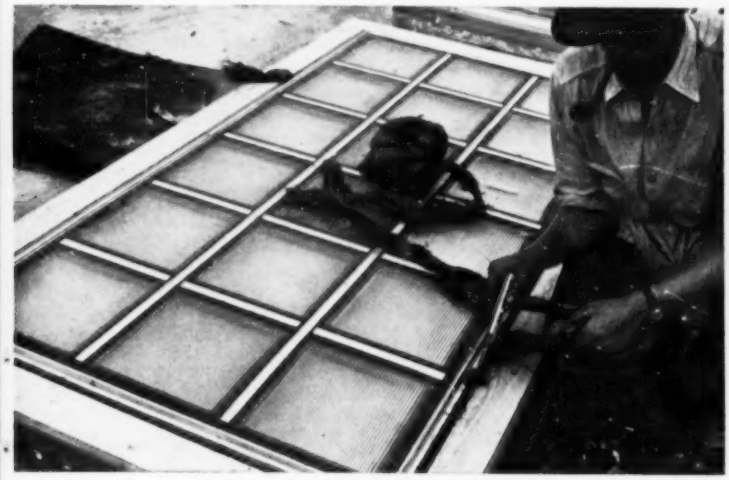


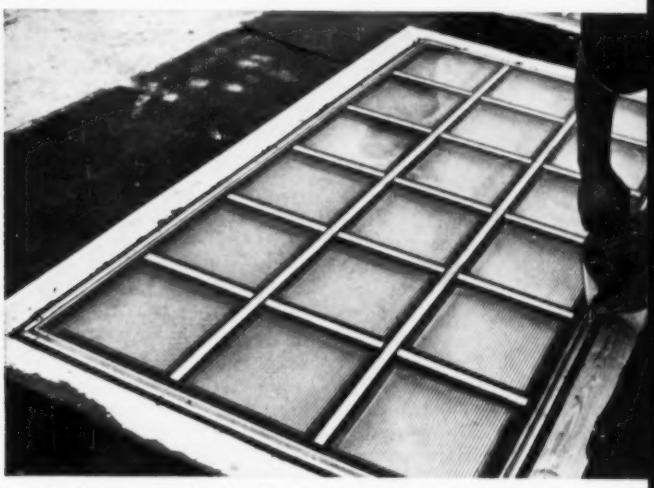
Black boxes (sketch left) indicate location of Toplite panels in corridor and classrooms. The high insulating value of Insulux Glass Block and Toplite Roof Panels reduces troublesome condensation in winter . . . reduces loads on heating and artificial illumination systems.





The new Middleville School, Middleville, Michigan, was designed by the architectural firm of Louis Kingscott & Associates, Kalamazoo, Michigan. It is the first school completed that uses a combination of Kimble Toplite Roof Panels and Insulux Light-Directing Glass Block panels. Here is a construction photograph of the roof of this new school. The Toplight Panels in left and right rows are in classroom areas. Center panels are overhead in corridor. (See sketches lower left).





Factory fabrication means uniform quality and low job-installation cost. Panels are set on prepared curbs. Left, above, marine-spun oakum is forced into the expansion space between Toplite Panel and curb. Next, right above, Vault-Light cement is poured in stages between Toplite Panel and curb. Cement is fast-setting and serves as a seal. Below left, worker trowels on asphaltic compound in preparation for laying of fabric membrane flashing material. Note roofing material is brought to top of curb.

The complete story of this great new advance in efficient utilization of *free* daylight is available in the bulletin: "Kimble Toplite—a new system in daylighting." Send for your free copy today. Address Kimble Glass Company, Dept. CU-9, Box 1035, Toledo 1, Ohio.

KIMBLE GLASS COMPANY

Toledo 1, Ohio—*Subsidiary of Owens-Illinois Glass Company*

New Dormitory Features Newest Plumbing

This installation in Men's Dormitory at Bradley University takes advantage of the modern design features of the Crane Criterion lavatory to form a continuous counter-top. Control valves illustrated have clear Lucite handles.

A new trend is shaping up in college washroom plumbing. It's a trend away from strictly "institution-type" fixtures in favor of the better-looking and more convenient fixtures that have proved their worth in modern home-design.

A good example is the Crane Criterion lavatory installation in the new men's dormitory at Bradley University. Installed side-by-side, these counter-top lavatories form a continuous surface that enhances the appearance of the room, makes best use of available floor space, and provides its own shelf for students' toilet articles.

The continuous counter-top is easy to keep clean, and so are the smooth surfaces of the chrome and Lucite fittings. And each lavatory is fitted with Crane's exclusive, drip-resisting Dial-ese controls, that make maintenance easy because all wear-subjected parts are enclosed in a cartridge that can be slipped out and replaced in seconds.

When building or remodeling, it will pay you to investigate this new trend in plumbing...and to let your Architect and Plumbing Contractor know your preference for Crane.

Bradley University Men's Dormitory, Peoria, Illinois. **Architect,** Gregg, Briggs & Foley. **General Contractor,** Val Jobst & Son. **Plumbing Contractor,** Crowley Bros.

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☐ *Send literature* ☐ *Have representative call*

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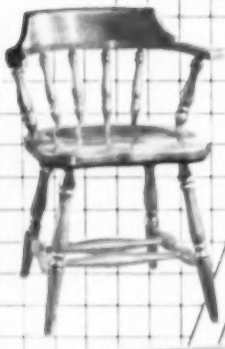

No. 127

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G U E S T E D I T O R I A L

PROFESSIONALLY, ARE WE GUILTY OF LAZINESS?

JOHN DALE RUSSELL
Chancellor and Executive Secretary
Board of Educational Finance, State of New Mexico

A SALIENT CHARACTERISTIC OF A PROFESSION IS its substantial body of organized literature containing the principles and facts on which the practitioner carries on his activities. These principles and facts in most professions have been developed and established by research methods. In the recognized professions research is constantly conducted to establish new facts, new principles, better ways of doing things.

Measured by such a criterion, is college and university business management approaching the stature of a true profession? How much of our literature can really be classified as research? How many of the facts and principles and recommended procedures laid down in the volumes that have been written on college and university business management have been adequately verified by research and are therefore trustworthy guides to action?

Three methods are commonly used in evaluating a condition or a suggestion for change. The first and most frequently used is personal, subjective opinion. Do I like the idea? Do I think it will work? Is it similar to something that I like or don't like? Clearly subjective opinion is not the approach of a true profession.

A second, and considerably better, method is to ask an expert for his opinion. Presumably the expert has had a wide range of experience and hence is in a position to make judgments that are superior to those most of us would make. College business management has profited greatly by the counsel of such men as Arnett, Morey, Gregg, Blackwell, and others like them. Particularly when there is agreement among the experts, we have a reasonably safe guide to action. This method of pooling the judgments of experts has been used frequently in developing guiding principles for college and university business management, notably in the case of the report of the National Committee on Standard Reports for Institutions of Higher Education in 1935, and in the volume published in 1952 by the National Committee on the Preparation of a Manual on College and University Business Management.

Even the expert can at times be wrong, as every profession has learned by sad experience. A third method, and the best now available, for establishing truth and developing safe guides to action is objective research. In the research approach, facts are collected that throw light on the problem at hand. An effort is made to get all the data that might have a bearing on the problem. This information is then analyzed in an unbiased manner to discover what generalizations can be discovered from it. The results are widely disseminated so that anyone may examine them for himself.

The conclusions drawn by a skilled and unprejudiced analyst can easily be verified by any similarly qualified investigator. Such conclusions have high validity and must therefore be accepted as trustworthy guides to action. Until research methods have been applied to a much more extensive range of problems, practices and procedures in college and university business management will be largely rule-of-thumb, and the work will be carried on at the craftsman level rather than on the plane of a true profession.

Much of the important and needed research in college and university business management can best be conducted not in some remote laboratory but right in the heat and drive of the practical operation of an institution. The busy members of a profession are the ones most likely to get the best ideas for research that will improve practices and procedures. Professional inertia should not be allowed to divert us from this important phase of our responsibilities.

The work we do in our routine activities, however capable our performance, will soon be forgotten. Our passing from the scene of action will leave only a rapidly fading memory of our service. But the man or woman who makes a contribution to our knowledge through research, who by investigation shows the way to improved practices and procedures, achieves a kind of immortality. Long after his passing his name is gratefully remembered, and he is honored as one who contributed to the growth and development of the profession in which he served.

Opportunities for research in college and university business management are abundant. The rewards are great, both in personal satisfactions and in the possibilities of improvement of the whole service of higher education.

Looking Forward

The Workshop Idea

THE UNIVERSITY OF OMAHA, UNDER THE LEADERSHIP and initiative of Charles W. Hoff, vice president, has for the last four years successfully conducted a week-long workshop for college business managers. This year the University of Kentucky, under the leadership of Frank D. Peterson, controller, conducted its first college business management institute. Both institutions and their personnel are to be congratulated for the vision and planning that made the projects successful.

Newcomers in college business administration, and many old-timers too, have found these intensive workshop and institute programs of great help to them. It has afforded them an on-the-job training or refresher course opportunity available to them nowhere else in the country.

College business administration is sorely in need of such aid. Many of its practitioners have wandered into the field without adequate preparation for the responsibilities that must be assumed. The workshop idea is a step forward in the direction of developing professional competence and merits the support and endorsement of official organizations in the college business field.

A special committee of the Federation of College and University Business Officer Associations might well be appointed for the purpose of working with interested institutions in strengthening and improving the workshop idea as initiated by the University of Omaha. The academic integrity of the curriculum offered must be the responsibility of the sponsoring institution, but there might be merit in the idea of trying to avoid identical duplication of academic offerings by the sponsoring institutions. Also, a committee of the federation might assist in preventing any conflict in the calendar of such institutes concerned.

It is encouraging to observe the efforts being made to provide specialized training for college business managers and to note the enthusiasm of those who have participated. These beginnings augur well for the continued improvement of college business administration.

How Do You Do Business?

AS THE NEW ACADEMIC YEAR GETS UNDER WAY, business officers are offered a rich opportunity for enhancing the public relations of the college. Basically, public relations is a "way of life," *not* a publicity gimmick. Business office relationships with students, staff, faculty, vendors, trustees and the local community are frequent and constant. Probably no other office is so often exposed to all members of the college family.

The business office should become a genuine center of service. Administration by fiat should be ruled out, and an atmosphere of friendly cooperation engendered. The human factor must not be ignored in the routine mechanics and paper work of the office. There's a real opportunity for the business officer to become the most effective interpreter of good public relations in the entire institution. It's not a responsibility that can be delegated to a subordinate.

We're Different!

IT IS RATHER SURPRISING TO NOTE THE FREQUENCY with which college administrators in the field of food service and housing refuse to compare their operations with commercial installations such as restaurants and hotels. "We're different," they say, "and comparison would only lead to confusion and misinterpretation."

There is truth in such a statement, but frequently there is also a reluctance to face reality. Some avoid making such comparisons, not because of an inherent difference in operating philosophy, but because they do not wish to have their inefficiency exposed. "We're different" is a weak crutch to use as a defense for poor management.

The responsibility for the type and standard of food service and housing rests with top management—the president, business manager, and trustees. If subsidy of such service results from top management's fuzzy thinking regarding its objectives it is too much to expect the food service or housing director to operate efficiently. The business office should aid by providing assistance in establishing fiscal control through adequate records and personnel. Because of the specialized nature of food service, and the lack of clear understanding of its problems by many business officers, the food director is often cast adrift with few guides as to proper charting of the course. It's not surprising that something goes wrong. The surprise is that it doesn't happen oftener.

When top management has determined its objectives for housing and food service it has gone a long way to assure good food service and housing. This is an area in administration where unit cost control must be established, even though such procedures may not have validity in other phases of the academic program.

Photos by United Press

THE SENATE'S right to investigate vs. THE INDIVIDUAL'S right to be heard

THE FIFTH AND SIXTH AMENDMENTS to the Constitution are basic guarantees of liberty which were the distillation of centuries of experience with abuse of the individual by an overbearing federal government. The amendments compel hearing and presentment by a grand jury, protection against double jeopardy, the right against self-incrimination, due process, jury trial, confrontation by witnesses against the individual, compulsory process to obtain favorable witnesses, and the right to counsel.

It is true that many of these guarantees apply only to criminal cases, but a brief reminder of the evils that gave rise to them are much in order today.

The words "star chamber proceeding" are rooted in our language. Like so many often-used phrases, realization of the exact content of these words has been lost through frequent use.

The star chamber in the Sixteenth Century was an English high court that was characterized by secret trial without adequate presentation of charges, peremptory procedure, no jury, forced testimony by the accused —often on matters of conscience— torture and cruel punishments.

It is not uncommon for the press, the bar, religious groups, and other organizations of unquestionable integrity to draw analogies between star chamber proceedings and some congressional hearings.

Many such accusations are unwarranted; all too many are accurate. I would point out that the lack of uniform rules of committee hearing procedure merely invites the abuse of individuals and the infringement of basic guarantees of a democratic society. It is not my purpose to dwell upon any particular instance. It is folly to permit the Congress or its committees to fall into such disrepute. The sole result will be to cause and

WAYNE MORSE
U.S. Senator from Oregon

Above: Senate subcommittee on the overseas information program listens to testimony.

intensify disillusionment and cynicism about our form of government.

The Congress must command and deserve the highest regard of the citizenry for probity and fairness. It should stand as a symbol and example of equal-handed justice and fair play. Moreover, abusive procedure by congressional committees cannot help but engender fear and compel sterile conformity. This involves an incalculable loss of free expression and the wholesome and open competition of ideas that is the strength of democracy.

We cannot tolerate, or permit the possibility of, committee procedures that create fear and repress open, frank and complete discussion. I recommend to the Senate the speech of Judge Learned Hand, delivered on Oct. 24, 1952, in Albany, N.Y. He said, in part:

"Our nation is embarked upon a venture, as yet unproved; we have set our hopes upon a community in which men shall be given unchecked control of their own lives. That community is in peril; it is invaded from within, it is threatened from without; it faces a test that it may fail to pass. The choice is ours whether, if we hear the pipes of Pan, we shall stampede like a frightened flock, forgetting all those professions on which we have claimed to rest our polity. God knows, there is risk in refusing to act till the facts are all in, but is there not greater risk in abandoning the conditions of all rational inquiry? . . .

"I believe that that community is already in process of dissolution where each man begins to eye his neighbor as a possible enemy, where nonconformity with the accepted creed, political as well as religious, is a mark of disaffection; where denunciation, without specification or backing, takes the place of evidence; where orthodoxy chokes freedom of dissent; where faith in the eventual supremacy of reason has become so timid that we dare not enter our convictions in the open lists, to win or lose. Such fears as these are a solvent which can eat out the cement that binds the stones together; they may in the end subject us to a despotism as evil as any that we dread, and they can be allayed only insofar as we refuse to proceed on suspicion and trust one another until we have tangible ground for misgiving. The mutual confidence on which all else depends can be maintained only by an open mind and a brave reliance upon free discussion."

The Congress has tolerated the conduct of some committees that permit the most serious charges against individuals without providing safeguards against unsubstantiated or highly questionable accusations or timely and adequate opportunity for defense.

Rights of Individuals Are for Protection of Society. In our system of government, it is a basic assumption that rules of law of general applicability are for the protection of basic rights of person and property. In a given case the effect of the rule may be distasteful or unpopular. But we cannot overlook that it is the rights of all members of society that our Bill of Rights and other protections to speech and assembly and conscience are designed to preserve. Any encroachment upon basic guarantees to satisfy the heat of the moment or to reach the abuses of a few individuals imperils the rights of the many.

Necessity for Senate Investigations. Since the early days of the republic, it has been recognized that the Congress has the right and must exercise the power to inform itself of needs for legislation, the manner in which laws are administered, the inadequacy and excesses of existing legislation and kindred matters. Only by investigation and hearing can Congress discharge its legislative function and fulfill its rôle of acting as a check upon and balance to the other major branches of government.

FORESTALL INVESTIGATIONS

There have been pressure groups seeking to forestall investigations by Senate committees. They have sought to accomplish this not by a frontal attack upon the power to investigate. They have sought to have this done indirectly—by starving out the committees—by withholding funds.

I am going to be no party to any organized drive in this country, I care not how sincere the intentions of those conducting it may be, to prevent the Senate from doing the investigative job that needs to be done. The members of the committee sit here under a great public trust, and I am not going to assume or presume that they will not live up to that trust merely because some persons do not like some of the committee members personally.

So far as I am concerned, I am not going to indulge in a presumption of guilt against anyone, including any colleague in the Senate of the United States. I am going to hold fast and true to a great principle of American justice, namely, the presumption of innocence, and the assumption that trials, investigations and hearings are going to be fair and in keeping with American principles of justice, until someone shows me that such an assumption is not justified. If that is demonstrated, then I will deal with the issue when it arises. But I disassociate myself from any movement that seeks to prevent the granting of funds necessary to enable the Senate to conduct an efficient and thorough investigation of subversive activities.

I submit that there are two basic principles that should guide the Senate in dealing with committee investigations and hearings: (1) recognition of the prime importance of effective investigation in aid of legislation; (2) recognition of the equally important necessity of maintaining and protecting the basic rights of citizens in a democracy.

Increased Committee Efficiency. One need attend few controversial hearings to realize the delay and confusion caused by the lack of formal rules of procedure. The wrangles—over appearance of counsel, the admissibility of evidence, the right of a witness to testify—often are protracted and seriously impair the dignity of committee procedure.

A set of rules applicable to all types of Senate committees would advise witnesses of their rights and guide chairmen and members in the conduct of hearings. Differing rules would lead only to confusion.

The investigatory power of committees is derived from the power of each House and is therefore properly subject to the control of the parent body.

Principles Embodied in Their Resolution. The major reforms proposed by myself are not novel. They stem from the principal constitutional guarantees, which I have sought to adapt to the special needs of Senate investigations. Senate committees cannot conform to the same strict rules imposed upon the courts. But any departure from court procedure—which has grown up over centuries in response to the proven needs of democratic society—must be absolutely necessary and strictly limited.

I outlined these principles in a speech before the Association of American Law Schools in December 1948. They are:

1. Before hearings are commenced, the subject of the investigation should

be clearly stated, and the evidence elicited should be relevant.

2. Witnesses should have the right to counsel, who would be allowed to advise his client while testifying.

3. The right to supplement testimony by oral or written statements, confined to relevant matters, should be accorded witnesses.

4. Accurate stenographic records of testimony should be kept of all testimony, whether given in public or executive session, and inspection allowed by the witness or his counsel. Copies of the transcript of public sessions should be furnished if requested and, in the case of executive sessions, it should be made available if later referred to in public session.

5. Persons mentioned or specifically identified in a public hearing should be afforded certain privileges before the committee or any member or employe comments adversely. Among these privileges should be the right to file a sworn statement, to be made a part of the record; the right to appear and testify; the right to limited cross-examination of witnesses whose testimony has adversely affected him, and the right to call, in the discretion of a majority of the committee, a reasonable number of witnesses in his own behalf.

6. No committee report should be issued except on adequate notice and with the approval of a majority of the committee.

Majority Action Required to Schedule Hearing and State Subject of Inquiry. A committee must have an actual quorum present when it schedules a hearing and states the subject of inquiry. Under my proposed resolution, the stated subject of the hearing could be changed only by similar action. Present limitations in the Legislative Reorganization Act on executive sessions apply only to standing committees and require only a majority vote without specifying that the vote be taken in the presence of a quorum.

I recognize the desirability of flexible inquiries. But it does not seem too much to ask that before a hearing a committee think enough about the matter to define the subject of its inquiry and to so limit the investigation until it takes formal action to expand the subject as the necessity arises.

Advance Notice of Meetings and Reports. This subsection also requires formal advance notice to members of committee meetings and submission of written reports prior to the meeting at which it is to be considered. At present there is a great tendency to rubber-stamp reports that members not only have not read but have not had the opportunity to see.

Chairmen of three congressional committees. Rep. Harold Velde (R.-Ill.) of the House un-American activities committee; Sen. William E. Jenner (R.-Ind.) of the Senate internal security committee, and Sen. Joseph McCarthy (R.-Wis.), Senate permanent investigating committee.

Hearing Procedure. Hearings would be limited to the subject matter decided upon by the committee. Witnesses are to have the right to representation by counsel who have rights similar to those of an attorney in court.

BAN HEARSAY RULE

Only evidence that is reliable and of probative value would be received and considered. We cannot impose the strict rules of evidences used in the courts, but they should be the guide. Rules of evidence have evolved over the years to ensure that only evidence of probative value is considered. The historic ban on hearsay serves a definite purpose. It ensures that the witness testifying observed the occurrences that he describes. It ensures an opportunity to test the observer's recollection and veracity. Lacking such safeguards committees and the public can be misled and reputations smashed with no opportunity for rectification. The normal exceptions to the hearsay rule—such as those for experts—would remain.

This rule would also protect the usual privileges for confidential communications between attorney and client, husband and wife, priest and penitent. These privileges are of value proved over centuries.

Witnesses would be given the opportunity to complete answers and make statements that sometimes have been denied them by banging gavels.

Any testimony that would be libel or slander if not given in a congressional hearing confers the right to rebuttal if made at a public hearing. Both libel and slander are specified as the evidence is usually oral but is normally printed. In addition, charges that the committee determines would subject a person or organization to *serious* hardship, embarrassment, shame or financial loss give the right to testify in rebuttal.

If possible, those subject to such attacks would be given advance notice. In any event, they would have the right to cross-examine the adverse witness and to call, within the discretion of the committee, witnesses in their behalf. As in private litigation, witness fees are to be paid by the party calling the witness.

Rights in Executive Session. Witnesses would have the right to be accompanied by counsel and before any publication of or comment upon adverse testimony given in executive session a person damaged thereby would have the same rights as in a public hearing. This would be so only where the committee decides secrecy is no longer necessary and the person affected would merely be given an opportunity to rebut accusations before they are aired in the press and radio.

Publication of Rules. In order that witnesses be advised of their rights these and supplementary rules must be available to them in the office of the Secretary of State.

The substance of my proposal would in no way diminish the investigatory power of the Senate. But it would provide these basic guarantees of fair procedure without which democracy cannot be said to exist.

From a speech made on the floor of the Senate.

Great growth of higher education shown in 1952 CENSUS OF FACILITIES

HAROLD W. HERMAN
Editor, College and University Business

IT WILL BE DIFFICULT, IN THE SPACE available, adequately to interpret the vast amount of statistical material that resulted from the 1952 census of college and university facilities in the United States conducted by COLLEGE AND UNIVERSITY BUSINESS. Some significant trends of interest to all college administrators will be reported in this article. The survey was conducted in the latter part of 1952.

The data are based on returns of 684 questionnaires out of the 1650 sent out. A response from 41 per cent of all institutions approached is a substantial return on any questionnaire as detailed and complex as the 1952 census of college facilities. The 684 institutions replying represented a total of 1,172,781 students, or 53.7 per cent of all full-time students reported by the U.S. Office of Education in November 1952. A summary of the types of institutions reporting in the survey appears in Table 1.

MANY PLAN NEW FACILITIES

To the query relating to the need for new facilities, 410 colleges and universities indicate that educational facilities have the highest rating or greatest immediacy, with 328 listing residential needs and 167 representing recreational needs. This would indicate that more than half of the institutions are planning new educational facilities and that slightly less than half are planning additional housing.

In regard to dollar value of the new construction planned between now and 1957, 531 institutions report that they are planning to spend a total of $1,301,679,000. Of this number, 341 say that $356,695,000 is to be spent for residence facilities, 438 that $815,196 is to be spent for educational facilities, and 222 that $129,788,000 is to be spent on recreational facilities. Projecting this to the field in general, we find that a $2,400,000,000 expansion is planned by colleges and universities during the next five years, or an average expenditure of $500,000,000 a year.

Institutions were requested to state how this construction program compares with construction they completed between 1947 and the end of 1951; 330 institutions report that it represents $557,591,000 more than in the previous five-year period, and 187 institutions report that it represents $274,397,000 less than the previous five-year period. Projecting this to the field as a whole, we find that 800 institutions plan to spend a billion dollars more in total than the same number of institutions spent in the preceding five years, but that 450 institutions will spend $520,000,000 less. This makes a net increase in planned expenditures of $480,000,000 in the next five years.

HOUSING

In the survey, 579 institutions answered the question on how many students are housed in college owned facilities. Of this number, 485 report a housing total of 187,820 men and 496 report a housing total of 145,521 women. Projecting the sample to the field at large, we find that colleges are housing approximately 610,000 students, or approximately 28.4 per cent of all students enrolled in higher education.

It was estimated by the 478 institutions reporting on expenditures for furniture that they had spent $6,336,000 for the year 1952. If projected to the field of higher education as a whole this would represent an expenditure of $11,800,000 for residence hall furnishings.

The approximate square footage of space in residence facilities in 470 institutions reporting amounts to 82,977,000 square feet. This sample represents 80 per cent of the total number of institutions answering the question on housing. If projected on the basis of our survey covering 53.7 per cent of the nation's enrollment, we reach a total of 103,700,000 square feet for those institutions covered in our survey. If projected to the field at large, we reach the approximate total of 200,000,000 square feet of residence halls.

A total of 484 colleges and universities say that pianos are provided; 382 report game rooms in residence halls; 327 maintain a phonograph-radio facility; 154 have TV sets in residence halls; 152 maintain snack bars; 143, music rooms, and 118, libraries.

Of the 579 answering the question on items provided in student rooms in residence halls, 568 provide a bed, 555 a chest or dresser, 556 a desk, 557 a desk chair. It is curious that 11 institutions apparently provide no beds for their students. Institutions numbering 244 report providing study lamps; 367, wastebaskets; 271, lounge chairs; 80, rugs; 104, draperies; 185, sheets; 136, blankets; 53, hand towels; 41, bath towels, and 42, bedspreads. Details are summarized in Table 2B.

FRATERNITIES

Our questionnaire asked how many business offices assist fraternities or sororities in their business operations. Only 16 institutions report assistance to fraternities in purchasing food, but

Table 1—NUMBER OF INSTITUTIONS RESPONDING TO C.U.B. CENSUS OF COLLEGE FACILITIES

STUDENT ENROLLMENT	PUBLIC	PRIVATE	NOT INDICATED	TOTAL
Group I (0-99)	25	19	....	44
Group II (100-249)	29	82	2	113
Group III (250-499)	33	111	1	145
Group IV (500-999)	53	95	1	149
Group V (1000-2499)	62	62	....	124
Group VI (2500-4999)	33	19	....	52
Group VII (Over 5000)	35	21	1	57
Total	270	409	5	684

Table 2A—FACILITIES PROVIDED IN RESIDENCE HALLS

ENROLLMENT GROUP	NO. OF INST.	NO. RESPONDENTS	LIBRARY	SNACK BAR	MUSIC ROOM	GAME ROOM	PIANO	PHONO-RADIO	TV
I (0-99)	44	28	9	5	5	16	23	14	4
II (100-249)	113	91	23	22	30	54	76	54	24
III (250-499)	145	122	19	33	34	80	107	71	28
IV (500-999)	149	129	19	28	29	76	102	70	35
V (1000-2499)	124	111	21	26	19	80	97	60	27
VI (2500-4999)	52	44	6	12	9	29	32	20	9
VII (Over 5000)	57	54	21	26	17	47	47	38	27
Total	684	579	118	152	143	382	484	327	154

Table 2B—FURNISHINGS AND LINEN SUPPLIES IN RESIDENCE HALLS

ENROLLMENT GROUP	BED	CHEST	DESK	DESK CHAIR	STUDY LAMP	WASTE-BASKET	LOUNGE CHAIR	RUG	DRAPERIES PAIR	SHEETS	BLANKETS	BED-SPREADS	TOWELS (BATH)	TOWELS (HAND)
I (0-99)	26	26	25	24	12	13	13	8	8	1	3	3	1	1
II (100-249)	91	87	87	88	36	60	38	11	18	24	22	12	8	8
III (250-499)	120	118	117	117	45	67	49	18	14	25	17	10	4	8
IV (500-999)	124	122	125	122	53	79	52	9	20	38	19	15	10	10
V (1000-2499)	111	109	108	111	42	71	60	20	22	49	36	28	10	13
VI (2500-4999)	43	40	41	42	21	34	20	1	3	16	12	8	3	5
VII (Over 5000)	53	53	53	53	35	43	39	13	19	32	27	21	5	8
Total	568	555	556	557	244	367	271	80	104	185	136	97	41	53

Table 3—COLLEGE UNION BUILDING FACILITIES

ENROLLMENT GROUPS		I (0-99)	II (100-249)	III (250-499)	IV (500-999)	V (1000-2499)	VI (2500-4999)	VII (Over 5000)	TOTAL
FACILITIES	NO. OPERATING UNIONS	11	25	42	73	59	33	45	290
Dining	No. Inst.	5	5	15	26	37	22	35	145
	Capacity	1535	844	2403	6210	10449	6462	27367	55270
Snack Bars	No. Inst.	8	26	51	78	57	32	42	294
	How Many	8	26	57	78	59	48	51	327
Sleeping Rooms	No. Inst.	1	3	4	13	11	5	10	47
	Capacity	15	45	172	1469	137	51	1609	3502
Meeting Rooms	No. Inst.	5	12	28	61	53	31	42	232
	Capacity	1035	1880	4573	11166	12693	13300	48978	93625
Table Tennis	No. Inst.	7	22	30	57	46	18	36	216
	No. of Tables	12	42	75	142	139	74	157	641
Billiards	No. Inst.	4	8	4	15	31	16	31	109
	No. of Tables	9	12	11	38	99	78	245	492
Bowling	No. Inst.	2	1	2	8	10	9	13	45
	No. of Alleys	6	2	8	30	52	49	134	281

30 institutions help them with furnishings, and 36 assist in the construction program of both fraternities and sororities.

STUDENT UNIONS

Reporting in the survey were 290 institutions that operate college union buildings. Of this group, 145 operate dining rooms in the union; almost all operate snack bars; 47 maintain sleeping or hotel room facilities; 232 provide meeting rooms; 216 make provision for table tennis; 109 have billiard tables available, and 45 operate bowling alleys.

Specific detail as to enrollment groupings indicates the prevalence of certain facilities in relation to the size of an institution.

For example, there are few unions in the small enrollment category that have sleeping room facilities, though it is interesting to note that in the enrollment group between 500 and 999, represented by 73 unions, 13 report sleeping rooms with a total capacity of 1469 persons. In the next enrollment category (1000-2499 students) 11 out of 59 report having sleeping accommodations, the total capacity of which is 137 (Table 3).

FEEDING

Survey figures indicate that 32 per cent of college students are being fed in college operated dining room facilities. As might be expected, the largest number of institutions report serving lunches, with 548 out of our 684 institutions serving a total of 362,230 lunches. Projecting this to the field as a whole, we find that more than a million and a half meals are served daily, including breakfast, lunch and dinner. Out of 684 institutions, 511 report spending $57,088,000 on raw food during the year. If projected to the field at large we find that $114,400,000 is spent annually for raw food.

Table 5—ACCOUNTING MACHINES

ENROLLMENT GROUP	NO. OF INST. SAMPLED	NO. HAVING MACHINES	NO. USING TYPEWRITER BOOKKEEPING	NO. USING PUNCH CARD TABULATING
I	44	13	11	3
II	112	40	21	3
III	145	57	32	3
IV	148	84	53	2
V	124	88	75	24
VI	52	43	33	31
VII	57	57	46	47
Total	632	372	271	113

Of the 542 institutions reporting on kitchen equipment, the present value is listed at $25,881,000, which would mean an approximate investment of $49,000,000 in kitchen equipment among colleges and universities in this country. During the previous year 389 institutions reported adding new equipment valued at $2,837,000. If projected to the field on the same basis, we find that approximately $5,000,000 was spent last year. Of the 684 institutions, 357, or more than half of those represented in the survey, indicated that food service facilities will be expanded within the next five years.

LAUNDRIES

Survey data show that 174 institutions out of 684 maintain and operate their own laundry, or a total of 25.4 per cent of those responding to the survey. A total of 118 institutions report an approximate capacity of 1,804,000 pounds per week. Out of the 684, 297 institutions provide coin operated laundry machines for student use; 356 institutions make washers available, which would indicate that 59 colleges provide washers without charging for them. Dryers are provided by 201 institutions.

It is interesting to note that 422 institutions report that present laundry machines are inadequate for their present enrollment, with only 262 feeling that their present equipment is adequate.

In regard to revenue from coin operated laundry machines, 203 institutions report an income of $452,561. Even with this substantial amount of revenue, 446 institutions say that the service did not pay its way; 238 indicate that it is self-supporting. Some 500 institutions provide ironing facilities in residence halls.

BUILDINGS AND GROUNDS

The 646 institutions answering the question regarding the acreage of campus facilities represent a total of 361,200 acres; a total of 16,470 permanent buildings is reported by 652 institutions. Some 159,725,000 square feet are involved in educational and administrative buildings; 79,178,000 square feet are in residential facilities, and 30,765,000 square feet are devoted to recreational square footage.

Details in regard to the kinds of mechanical equipment owned and operated, such as power mowers, portable fire extinguishers, snow removal equipment, lawn sprinklers and lockers, are available in Table 4. The most widely used piece of equipment is the power mower, with 621 institutions maintaining such machines. Portable fire extinguishers run second (584 out of 684). A total of 531 institutions

Table 4—BUILDINGS AND GROUNDS EQUIPMENT

ENROLLMENT GROUP	NO. IN C. U. B. SURVEY	POWER MOWERS	MOBILE FIRE EQUIP.	PORTABLE FIRE EXT.	BUILT-IN SPRINKLERS	SELF-PROPELLED PLOWS	PLOWS ON OTHER VEHICLES	AUTOS	TRUCKS	BUSES	LAWN SPRINKLERS	FENCING	LOCKERS	INDOOR SWIMMING POOLS	OUTDOOR SWIMMING POOLS
I (0-99)	44	35	4	33	5	3	9	18	20	12	19	16	28	8	2
II (100-249)	113	98	14	88	8	14	32	54	71	35	44	41	72	18	18
III (250-499)	145	128	20	125	17	20	65	84	101	35	67	57	98	37	11
IV (500-999)	149	139	21	127	26	29	74	94	125	55	97	89	129	60	13
V (1000-2499)	124	118	25	112	26	29	67	96	114	56	80	83	106	63	10
VI (2500-4999)	52	48	15	44	22	18	30	41	44	21	32	43	45	43	6
VII (Over 5000)	57	55	19	55	40	21	39	50	56	33	49	48	52	71	15
Total	684	621	118	584	144	134	316	437	531	247	388	377	530	300	75

maintain some type of truck for use in the maintenance program; about one-third maintain buses.

OPERATION AND MAINTENANCE

In regard to operation and maintenance, 572 institutions report using 307,135 gallons of indoor paint; 540 institutions report using 133,677 gallons of outdoor paint; 531 institutions report purchasing 37,298 gallons of varnish. Our figures revealed that in 525 institutions painting is done by the regular staff, 307 institutions utilizing individual contractors. Some institutions follow both practices, but the larger percentage does most of the painting themselves.

For floor maintenance, it was odd to note that 594 institutions utilize the domestic type of vacuum cleaner, of which 365 also use the heavy-duty mobile tank type. Only 64 institutions report having built-in systems of vacuum cleaning.

ADMINISTRATIVE EQUIPMENT

Of 682 institutions answering the question on administrative equipment, 372 report utilizing machines for accounting; 271 institutions maintain typewriter bookkeeping machines; 113 operate punch card tabulating equipment, and 620 institutions operate duplicating machines. Readers will be interested in studying the enrollment category to note the extent to which machine accounting is used (Table 5). As for dictating equipment, the cylinder type dictating machine is the most popular, with 415 institutions reporting that they operate 4247 machines; 313 operate 1413 of the wire or the tape type, and 292 institutions use 2175 disk machines.

PROJECTORS, RECORDERS

In regard to projectors and recorders, 591 institutions operate 7362 recorders and, during the past year, 226 institutions purchased 785 such items of equipment. When it came to motion picture projectors, the 16 mm. sound projector was way out in front of the silent projectors, with 606 institutions reporting they operated 3430 such machines. Of this number, 238 purchased 459 such machines during the past year, or almost two machines per institution.

MUSICAL INSTRUCTION

Figures in the survey indicated that colleges are quite musically inclined, with 643 institutions reporting a total of 13,511 pianos and 506 institutions reporting 28,190 other musical instruments.

In the field of home economics, figures indicate that electric ranges are crowding gas ranges for popularity in home economic kitchens, with 335 institutions reporting 1912 electric ranges and 312 institutions reporting 2291 gas ranges.

LABORATORIES

There is approximately $314,000,000 invested in scientific equipment in the institutions surveyed and the annual purchase of scientific equipment and supplies amounts to about $34,200,000.

The last subject of the survey was bookstore operation. Out of 684 institutions, 559 report that they maintain institutionally owned bookstores. Of this group, the annual gross volume of 526 reporting amounts to $43,348,000. Purchasing agents will be interested to learn that the purchasing department handles purchasing for the bookstore in 177 institutions, while in 462 institutions reporting the bookstore purchasing is done directly by the store manager.

Central Car-Washing Platform

GEORGE GAGON
Engineer, University of Idaho

ONE OF THE MOST POPULAR SPOTS on the University of Idaho campus is a clover shaped car-wash platform where student cars from all over the nation can be seen receiving "beauty baths" at the hands of their owners.

Planned and developed by the University of Idaho's physical plant division at a cost of $1430, this successful project pleases the administration officials. Not only does it provide a central place for students to wash their cars, but it also aids the university in protecting the beauty of its rolling campus.

Before completion of the project, campus lawns around group housing were disfigured with mud holes and tire tracks, the result of the students' desire for clean cars. A second problem was the matter of misplaced hose. Before the car-wash platform was built, it was a common occurrence for a student to "borrow" a hose from a university lawn and, in his hurry for that "big date," forget to return the hose.

The car-wash consists of four concrete slabs, sloping toward a central drainage system, with a separate hose for each platform. It is well away from the university proper, thus protecting the lawns from ruts and mud holes.

For top administrative personnel —

CAN OUR COLLEGES

ROBERT FOSTER MOORE
General Manager
Richardson, Bellows, Henry & Co., Inc.
New York City

COLLEGES AND UNIVERSITIES HAVE an inside track when competing for top administrative personnel but, more often than not, they are not taking full advantage of their position. Instead, they are generously and properly supplying manpower, training and facilities to help business and industry solve a similarly severe problem common to both town and gown.

Today's scarcity of management personnel has spotlighted the need for better plans, policies and procedures designed to develop a strong administrative group in continuity for universities and colleges, as well as industrial corporations. This conclusion is arrived at after sampling the best thinking of 20 key college administrators.

For the purpose of this article, the definition of "top administrative personnel" encompasses the nonacademic or business type of positions on the campus, exclusive of the presidency, which is a special problem in its own right. Roughly speaking, these positions would therefore include, among others, those directors and department heads grouped under the functions of treasurer, controller, public relations, buildings and grounds, personnel, dining halls, residence halls, office management, and the numerous other services that support the teaching, research and student population.

Can campuses compete? The answers, by my panel of advisers, ranged from statements like, "Large or heavily endowed institutions are having no difficulty in attracting top administrative personnel in competition with industrial fields," to, "No, they cannot compete," and, "Universities do not have enough able administrators . . . owing to their salary and promotion policies"; and, another, "There is not as much competition between industry and universities as we sometimes think."

There was general agreement, nevertheless, that "a good man is hard to find." When a need arises for a highly qualified administrator to fill a certain key spot on the organization chart, he is not always available on the campus and a long and difficult search ensues. On the other hand, most colleges and universities would prefer to promote from within, "other things being equal," but in the end the important objective is to get the best qualified individual wherever he may be found.

SPECIAL REQUIREMENTS NEEDED

At this point, when the search for this highly qualified administrator begins, we bring into focus the comparative values, opportunities, advantages and disadvantages, and the highly important special requirements and qualifications of an effective university and college administrator.

In terms of requirements and qualifications, they are somewhat more exacting and specialized for university and college administrators than for business executives. Robert Kimball of M.I.T. says: "The university business group has to be a little more sensitive to the clientele it serves; faculties and student bodies are understandably allergic to regimentation and their needs for services are more likely to vary. . . . Also, planning under tight budgets represents a challenge that calls for a higher degree of imagination and ingenuity."

Dean Daniel D. Feder of the University of Denver describes these special qualifications as follows: "The difficulty is not so much with finding trained persons as it is in getting persons who have proper academic understanding and orientation. There is nothing quite so irritating to faculty members as having to deal with business officials who have no appreciation of the special and unique problems of an educational institution, but who always insist on approaching all problems the way 'the book' was written."

Along with these personal qualities that help the administrator to integrate and ingratiate himself with the academic side of the campus, there are specialized abilities, skills, experience and training required of any good management executive. John Teele of Harvard points out that, "The administrative setup in a university is apt to be much more complex than in business; that is, the existence of unofficial as well as official lines of authority is taken for granted, and these unofficial lines of authority, and possibly of influence, may be considerably more important than in industry. This means that it takes a more agile person to operate successfully."

COMPARABLE TO A BUSINESS

A vice president for business, a controller, a treasurer may be responsible for the administration of budgets ranging from a few millions to more than $20,000,000. Likewise, department heads and directors may be charged with administration comparable to running a small or big business. Housing, feeding, operating buildings and grounds, fund raising are but a few examples.

Do the institutions offer adequate economic compensation for the high requirements of their administrative positions? Most of my panel of advisers concluded that universities cannot compete in salaries with the profit enterprises. Likewise, there are no

COMPETE WITH INDUSTRY?

Academic institutions have an inside track when competing with industry for administrative personnel.

bonuses or profit sharing plans. The differential in pay is greatest for the highest level administrators. Middle management positions, on the other hand, are more likely to be paid on a reasonably competitive scale.

Administrative salaries are affected by the modest scale for faculty positions that prevails throughout most colleges. The general policy at many institutions is to see that the salaries of administrative offices do not exceed those of the faculty—one important way to keep good morale among the faculty which is, after all, the backbone of any university. Members of the faculty, however, are paid an annual salary based on eight or nine months' work, while the administrator's work year is 12 months. The professor often can do outside consulting work or add to his income by lecturing or teaching at summer schools.

WHY THEY STAY ON

Donald E. Dickason, director of the office of nonacademic personnel, University of Illinois, observes: "Top management positions on the campus are considerably underpaid as compared to what their incumbents could get were they in outside employment. . . . When we ask ourselves why the top people stay on when they know they could do better financially outside, we would probably get several answers: (1) They have come to their present positions through advancement within their own institutions and have become accustomed to that institution and have their roots down deeply in the community; (2) they have attained a type of security and tenure that makes them hesitate about entering into a new relationship with the attendant uncertainties; (3) some, at least, would feel actual fear of entering into what they think is a more competitive, rough and tough atmosphere of the business world and prefer to stay put for that reason."

THE INTANGIBLES

This all adds up to a pleasant insidiousness about institutional work. There is a freer atmosphere, more permissiveness, and generally less immediacy of pressure. There is, also, the stimulation and excitement, the prestige and pleasure of association with the field of education, its great teachers and striving students. Life in a college community can be very attractive.

The insidiousness comes about when one realizes that this attractive way of life is one he cannot afford without a private income. Nevertheless, these are the intangible values that for many administrators mean more than economic return. Chester D. Onderdonk of New York University, speaking somewhat nostalgically about out-of-town college life, says: "There are many nonfinancial incentives that attract personnel to the suburban or small town colleges that can pay fairly good salaries and provide a 'good life' in lieu of some cash. The slower pace and the pleasant physical and social surroundings tend to attract administrators who enjoy a life away from the push and shove of cities. Many accept lower compensation and have been attracted by the glory and prestige as well as the pleasure and satisfaction of academic associations."

John W. Teele of Harvard stresses another intangible: "I believe that the most important intangible, contrary to the opinion of some, is *not* that of having a 'soft job' or of 'not being under pressure,' since many college jobs are distinctly not easy and since there is pressure of one kind or another in most cases. On the other hand, an opportunity is offered for a person possessed of specific skills to use these skills in such a way as to get a greater amount of personal satisfaction from the job than he probably would in business. While not always true, there is more opportunity for a person to use imagination and originality in the analysis of business problems." And with less fear of condemnation if the analysis goes wrong!

Trent C. Root of Southern Methodist University points out that intangibles such as suburban living, more holidays, and prestige do help offset the salary differential between campus and business, but he states: "On the other hand, in our more responsible jobs we pay salaries at the business rate. The executive committee of the university believes that the management of $5,000,000 annual gross income should be the best regardless of the objectives of the institution receiving the income."

Trent Root came up through the ranks as instructor in economics, professor, assistant to the president, dean of the school of business, and now controller. He says, additionally: "I realize fully the chief objectives of an educational institution, including the fact that all nonacademic matters are secondary to the main object. I am firmly convinced that top nonacademic administrators should be among the best paid on the campus for two reasons: (1) Proper business management facilitates instruction; (2) efficient business management effects savings that can be used to increase the instructional budget."

Through interpretation of the evidence of my advisory panel I am con-

vinced that colleges can compete successfully with business and industry for top administrative personnel. For highest degree of success certain conditions must prevail and steps must be taken. These are the conditions:

1. A progressive and interested board of trustees.
2. An organization-minded, forward looking president.
3. A sound organization structure.
4. Recognition of administrators as true members of the academic family.
5. An equitable salary scale based upon sound methods of evaluation.

These are the steps:

1. Organization analysis and planning (including position descriptions).
2. Forecast of administrative personnel requirements—(*a*) understudies as backstops; (*b*) replacements for retirements.
3. An administrative development program.
4. Fixed responsibility for continuity of the program.

I have stated that academic institutions have an inside track when competing for administrative personnel. They have resources sought after by business and industry—resources of people, of training technics, of consultation, and of opportunity for development. Not only have the institutions an inside track but they have the first chance at these resources. Why not use them oftener?

Colleges and universities know who are their best students, graduates and alumni. Among them are undoubtedly able men and women to fill, or be trained for, any administrative job. The business of the institution is education. Why not use it for developing nonacademic administrators? If not a full program, such as in business, at least a short pilot program of orientation for young university executives is possible. More ideal would be an advanced management (Harvard School of Business) type of series, designed especially for the campus administrator. Many college and university professors act as consultants to industry on problems of organization planning and executive development. Why not call on their talents to be applied at home?

I found nowhere a real attempt at a formal program of management development. There were traces of informal programs. A university vice president remarked: "In a sense any good manager is always watching the staff for competent men and women."

Donald E. Dickason suggests that, "Any organization should pay close attention to the *rule of two:* namely, always to have in an understudy position someone under the incumbent in any job of importance." There has been quite a trend at some institutions in recent years to bring into administrative positions bright young men between 25 and 35, and occasionally a few immediately after graduation. More often than not, they move on to other fields for various reasons, but in the meantime, the institution has had the value of first-rate services and the individual has benefited greatly by the experience.

Dr. Karl Compton, when he was president of M.I.T., purposely picked promising young men as his assistants, usually from Course 15. Dr. Killian, now president and Bob Kimball, director of business administration, were two of his choices. Other choices have gone on into business and government and are highly successful. Perhaps we should not feel too distressed to lose able potential administrators from the campus when we know that we have contributed to the pool of high level administrators also badly needed by industry.

PROBLEMS OF SMALL COLLEGE

"At smaller institutions, such as Dartmouth," states John F. Meck, treasurer and vice president, "the problem of developing administrators is complicated because there are relatively few positions and by and large the job follows the man. Hence, every time an older man retires from one of the more usual positions there is a general reshuffling as we promote from below."

Here again is an opportunity for the larger educational institutions to seek out and develop able young administrators. If these young executives find no early opportunity at their own institutions they could be made available to other institutions, both small and large.

The University of Omaha conducts a summer workshop for college business training, and the Eastern Association of College and University Business Officers, the Southern Association of College and University Business Officers, and the National Association of Educational Buyers conduct a workshop for training college business officers. Purdue University has a management development program in university business administration. At Teachers College, Columbia University, according to Dr. M. C. Del Manzo, their work in educational administration provides an internship and also such courses as "Purposes and Policies in Higher Education"; "Overview of College Administration"; "Administration of Higher Educational Institutions," and "Financial Administration of Higher Educational Institutions." There is no lack of opportunity for direct or indirect development of administrators.

Nevertheless, from time to time, a college or university, usually of the smaller group, will need to find a specialist of one sort or another—a treasurer, a fund development man, a public relations expert, a buildings and grounds director, a dining hall manager. In my own experience at Columbia, and with my present firm, I have received numerous calls for help to find such people. It is usually by accident that I know of someone qualified for the particular job.

Finding a qualified person for a high level administrative position is an important and exacting assignment and should be approached seriously and carefully. Colleges could learn a great deal from the management consultants who search for top executives for their clients—clients who ask for the *best* qualified person, not just *a* qualified person for the position.

John Teele of Harvard suggests a national clearinghouse for administrative jobs. "Such a clearinghouse would do something more than is now done to bring candidates together with openings." This idea ought to be picked up and backed by the various college business associations.

In conclusion, I agree with John Moore of the University of Pennsylvania, when he says: "A lot of college presidents need to be alerted to the fact that they face some tough financial and business problems in the years ahead. Expanded plants, high prices, increased taxation, institutional competition are but a few." Men of the highest calibre are needed, men of great skill and experience, with special knowledge and understanding of the peculiarities of campus administration. There are large and challenging responsibilities ahead for the present and future administrators. Colleges and universities, to meet this challenge, *must* compete successfully for top administrative personnel—and one sure way is through a program of management development.

Room and board fees, as well as tuition fees, on a

PAY-AS-YOU-GO PLAN

ROBERT R. MALL
Cashier, Carnegie Institute of Technology

IN THIS AGE OF WITHHOLDING TAXES and long-term installment buying, why not a "pay-as-you-go plan" to enable college students to pay their tuition and room and board fees while attending classes?

We have developed such a program at Carnegie Institute of Technology and by so doing have done much to alleviate undue financial strain on several groups that at the present time make up a large percentage of the student bodies in American colleges and universities.

Of these groups, let us first consider the veterans of World War II. Many of these students, enrolled under the G.I. bill, who had all expenses for tuition and books and supplies paid by the government, now find themselves in their senior year with their entitlement run out and with insufficient financial backing from home to allow them to complete their proposed program.

"REGULAR STUDENTS"

A second group to consider is that which may be called "regular students," those who are supported financially by their relatives or friends or from income derived from their own summer and part-time employment. Many of these students, who perhaps at the outset saw the road clear for the completion of their desired programs, now find themselves caught in the squeeze of steadily rising tuition and residence hall and board rates.

Students in another group, whose problems may be even more pressing than those of the other two mentioned because they are so newly arrived on the college scene, are the Korean war veterans. In direct contrast with the World War II veteran whose expenses for tuition and supplies were paid in lump sum to the college by the government, these students receive monthly allowances out of which they must arrange with the college at which they are enrolled for payment of tuition, room and board, and all other expenses.

Our policy of payment in advance at the beginning of each semester for all tuition and dormitory charges had, in most cases, been strictly adhered to since the founding of Carnegie in 1900. However, in rare cases of extreme financial stress we had permitted certain students to make a part payment at registration with the unpaid balance covered by a short-term promissory note to be paid off in monthly installments. This policy was never given much publicity nor did announcement appear in any of the college publications or catalogs, so the plan was not used to any great extent.

Before the first Korean veterans contacted our admission office, we realized that in order to permit these students to pay for their education as they attended classes we must either formulate a new system of deferred payment or expand our present plan to accommodate the increased numbers. We decided upon the latter course.

The working mechanism of the system now used is a simple one. The Korean war veterans and all other students who are not prepared to make full payment of fees at the time of registration contact the dean of students in his office and fill out an application for a short-term note. The following information is found on the face of this application: the student's name and address, his class, department and the date of the application; a listing of his expected fees for the semester involved, tuition, dormitory and additional fees; a schedule of expected payment of the note, including so much cash at registration and the installment dates for payment of the short-term note covering the balance; a blank to be signed by parent or guardian of the applicant certifying that he has read the application and that it meets with his approval; a blank to be signed by the student borrower, and finally a blank to be signed by the college official who finally approves the application.

REGULATIONS ON BACK

On the back of the application form are listed the general regulations governing the short-term note. Among the rules listed here the most important are: (1) the information that a service charge for short-term notes of 50 cents per month for each hundred dollars or fraction thereof is made, and (2) the warning that the penalty for failure to meet payments is prompt exclusion from classes and from the final semester examinations.

After preliminary investigations prove the credit rating of the applicant satisfactory and the application is approved, the next step is the issuance of the note itself. This instrument contains on its face the final definite

schedule of amount and date of each installment to be paid to the school, together with the following statement: "For value received on or before .....19..... I promise to pay to Carnegie Institute of Technology, or order, at the office of its cashier at Pittsburgh, Pa., the sum of ..... dollars ($) and a service charge of 50c per month for each $100 or fraction thereof." The note is signed by the student maker and approved by the same college officer who approved the application.

On the back of the note, under the italicized caption "Please Read Carefully," the following information is found: "You have been permitted to sign a promissory note for a part of your obligation to Carnegie Institute of Technology. As these obligations are ordinarily payable in full in advance you have been granted a favor in being permitted to defer a part of your fees.

"This note cannot be reduced in amount by withdrawal from school or by reduction in schedule unless such withdrawal or schedule change is made within the time limits published in the institute catalogs.

"A promissory note is a business obligation and payments must be made on or before the dates agreed upon in order to remain in good standing. A student whose obligations to the institution remain unpaid on the date fixed for their payment will be debarred from classes until his or her financial relations with the institution have been satisfactorily arranged. A fine of $5 may be imposed before re-admission to classes is granted."

ONE-THIRD IN ADVANCE

In all cases where notes are issued we require that one-third of the total amount due be paid in advance, and only the remaining two-thirds be paid in installments. The due dates are ordinarily set as the first of the month, and never is the last installment permitted to fall later than the first day of the last month of the semester. In other words, if the semester begins in September and ends in February, payments are due October 1, November 1, December 1, and never on a date later than January 1. We have found it necessary to take this precaution in order to ensure ourselves enough time to enforce collection in the event the final payment is delinquent.

The note is issued by the dean of students in triplicate. One copy is kept by the issuing office, one is retained by the student, and the third is presented to the cashier by the student at the time he registers. In no event is a student permitted to complete his registration without either payment in full or one-third payment plus a note to cover the balance.

HOW NOTE IS HANDLED

When a student presents a note, all charges and his one-third payment are posted to his account, leaving open the balance, that part covered by the note. The installment dates and the amount due on each date are noted on the top of his account card and the note is then filed under the first due date. From then on, so long as the student makes his payments in person or by mail on or before the date due, his balance is gradually reduced until finally his debt is paid in full, his account is cleared, his note is stamped "paid in full" and returned to him, and the process is completed.

In all cases in which payment is not made on or before the date due, the students involved are immediately summoned to appear in person at the cashier's office. Here they are questioned concerning their delinquency, and in some cases when they are able to offer a legitimate reason their payments may be deferred for as long as 10 additional days. If payment cannot be made under any circumstances, action is taken without delay to have the delinquent student debarred from all future classes until his financial relations have been righted.

This process is initiated by a letter from the cashier to the dean of the college involved requesting that the student not be permitted to attend classes. This letter is passed down from the dean through the department heads to the instructors, who ultimately take the action. This treatment brings quick results in virtually all cases, and as soon as the account becomes current a second letter is written through the same channels lifting the debarment and the student is permitted to resume classes.

In the event that a student withdraws and is not entitled to a refund allowance sufficient to cover the balance of his note, a letter is directed by the cashier to the registrar, who lists the student as delinquent and stops all transcripts of records and grades to any college where he may desire to matriculate. Again, this notice of delinquency is lifted by the cashier after the account becomes current.

Our experience at Carnegie has taught us that there are two practices that must be strictly adhered to in order to ensure the success of any pay-as-you-go plan. In the first place, it is imperative that a close and constant vigil be kept over all accounts involved in the plan. No leniency can be shown in extending payment dates without excellent supporting reasons, and immediate action must be taken to enforce payment of delinquent accounts. If we at Carnegie were called upon to propose a motto suited to our pay-as-you-go plan, that motto would of necessity be "Delay is fatal."

In addition to this constant vigil over accounts, the wholehearted cooperation of the educational departments must be maintained at all times. Department heads must realize that only when they take action without delay and follow up with debarments can the plan function successfully.

ONLY FOUR DELINQUENTS

For the fall semester 1951-52, 322 notes were issued totaling $52,249.60. At the close of the semester four accounts were delinquent in the amount of $278.62. All four of the students involved withdrew sometime during the semester and were not entitled to enough of a refund allowance to cover their notes. At the opening of the fall semester 1952-53, 393 notes were issued totaling $68,081.42.

Despite the constant increase in the number of students taking advantage of our deferred payment plan we have not found it necessary thus far to increase our staff. Naturally the problems of delinquent collection bring an increased burden, but we honestly feel that the good will created by the existence of our pay-as-you-go plan ensures its continuation in the future.

CAMPUS and CARILLON

cast bells versus electronic bells

ARTHUR LYNDS BIGELOW
Bellmaster, Princeton University, Princeton, N.J.

IT IS SIGNIFICANT THAT THE FIRST carillon to be installed in this country was placed in the tower of a university! When the bells of Notre Dame were hung in the chapel tower, almost a century ago, it seemed to point a finger in the direction that many carillons were later to take. Today many of our greatest installations ring out from the towers of schools and colleges, and it is these carillons which, more than any others, approach the civic rôle they play in the land abroad where the instrument was born.

In Belgium and Holland the carillons hang in the towers of churches and belfries above the market place, in the center of town. They tell the time, call to worship, ring in the holidays, toll in time of distress, play their aerial concerts in the twilight of long summer evenings. It is only on our campuses that the carillon, in the new world, can claim any such partaking in the life of those who go about their daily tasks within earshot of the tower.

The bells in our towers today are of two types: the traditional cast bell and the electronic bell. It is safe to say that of all chimes and carillons in our college belfries today fully three-fourths of them are electronic! Indeed, without the advent of the electronic carillon, many of these institutions could not have afforded bells at all.

TRADITIONAL AND ELECTRONIC

Traditional chimes and carillons are instruments of cup-shaped cast bells upon which melodies can be played. If the instrument is classified as a carillon, it should have a range of at least two chromatic octaves and be capable of rendering harmony as well as melody.

Electronic belfry instruments are of two types: those that are customarily classified as "chimes" and those classified as "bells."

Chimes are ordinarily made up of tubes, bars, rods; in short, anything that possesses a ring when struck. The vibrating metal is amplified and the resulting tone broadcast from the tower through large speakers or stentors. The tone of the chime is, of course, directly dependent upon the body producing it. Tubes, bars, rods, all have their distinctive tones, and are often classed as "bell-like."

Electronic bells are quite different from chimes. They are made of bell metal, struck with a steel hammer as a bell is struck, and so engineered to produce, when set into vibration, the same overtones that a bell itself produces. Thus, electronic bells are capable of producing the same music, the same effects, as cast bells.

The well designed and well tuned electronic carillon of four and even five octaves can express all the crescendos and diminuendos of the traditional instrument, is capable of full harmony, and can interpret the literature written for the instrument.

There are several reasons why the electronic carillon has found such favor, namely, weight, condition of tower, cost, and the tone itself.

ELECTRONIC BELLS WEIGH LESS

Compared to the tons of metal in a cast bell instrument, the electronic one weighs but a few hundred pounds at the most. Therefore, if a tower is not strong enough to support cast bells, and a major reconstruction job would be necessary, the existing tower can always support electronic bells. If the

Left: This shows a complete installation of electronic carillons and ringing equipment. The consoles for both 61 note (Flemish type bells) and 25 note (Old English type) sets are turned back to camera. The box on left wall contains the 25 Old English bells. To the right of clock on rear wall are to be seen the five octaves of the Flemish type bells, and an amplifying unit. In the center is the automatic roll-player, and, to its right, four power units. The entire equipment may be housed in a space 8 by 12 feet, and 8 feet high.

tower is too small for a belfry full of cast bells, enough to assure the instrument's adequate range, room can always be found for the electronic instrument. If there is no tower at all, the latter still can be installed, its stentors placed in an unnoticed part of the building.

Because of its little weight and the facility of installation, the electronic carillon costs but a fraction of that of the traditional.

Many people actually prefer the tone of the electronic carillon to that of cast bells, and when it comes to playing the instrument, the standard piano keyboard lends itself at once to the new performer, who will not need to study the special "baton" type of clavier needed to play cast bells.

Many and varied are the uses of such a carillon on a college campus. The bells may play the quarters, and strike the hours; they may ring for reveille, ring at mealtime and at the changing of classes; they may ring the curfew at the end of day, and they may peal out on those special occasions, such as "alumni day" or "homecoming," or ring in the event of victory on the field. But they are most appreciated when they are played in concert on a quiet Sunday afternoon or late evening.

The bells may be played in several ways. An automatic clock plays the quarters and strikes the hours. A "program" on the clock sounds the bells at desired intervals during the day. The same clock can send an impulse to an automatic roll-player that will play any desired tune or hymn. This roll-player is a simply operated machine and will play at any selected time or times a single number or a group of numbers in sequence.

Right: Console of the 61 note instrument, a carillon of five full chromatic octaves. The lowest note gives the same tone as a bell weighing 20 tons. This is the Flemish type.

An ivory keyboard is always ready for the touch of the musician who will play the bells in peal or concert. This keyboard is from two to five octaves in range, depending upon the number of bells. When the bells are connected to the organ, it is possible to use them as a melody stop and accompany them on the organ. The bells in the tower may be played from the organ console.

The Angelus may ring out, followed by the ringing of a bell, giving the same effect of a great bourdon swinging back and forth in the tower. The Angelus is completely automatic and governed by the clock. Furthermore, the effect of a complete peal of four or more swinging bells may be realized, their notes interlacing with one another in an ever-changing pattern.

The installation of the electronic carillon is extremely simple; its upkeep is negligible. Once well installed, it will require no supervision beyond a periodic checkup, provided the maker is jealous of his product and proud of his workmanship.

How to make yours a

SUCCESSFUL BUILDING

KENNETH D. LAWSON
Manager, Men's Residence Halls
Michigan State College, East Lansing

As we view the job of "How to Build a Successful Building" through the eyes of one whose immediate concern is housekeeping and maintenance, we must have a cooperative architect who is anxious to help us build a strong, beautiful, but primarily a functional, structure. If we are assigned a job of this kind with an architect who "knows it all," we are destined to fight an uphill and probably a losing battle.

We must follow a logical approach to the clear interpretation of just what the building's function really is to be. This is the main part of our problem because here we must exercise the skills that separate outstanding management from mediocre custody. We must combine (1) an understanding of our past operations, (2) an awareness of the present situation, and (3) a reasonable prediction of future requirements. We must, with some perceptible degree of accuracy, make decisions on the basis of these three views of our job. The first two are fairly common, the third is unfortunately not.

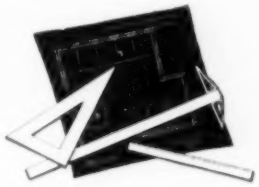
THE FUNCTION

As we tackle the job of acquainting our architect and mechanical designer with the function that is to be performed by our building, we must first of all establish a standard. It is essential that this standard be accurately selected, otherwise the results will not be happy. If the standards are too low, the whole personality of the future student body may be changed despite other efforts to the contrary. If the standards are too high, and I am assuming room rates will reflect these standards realistically in every case, there will be a change in the student body, not only in personality but probably in size. In either case, we can assume that management will bear a good share of the resulting agony.

Probably the housing standards can best be selected on the basis of older operations. Except for improvements that keep pace with new developments in the field, it is probably safe to say that no extreme changes should be made without sound reasoning being applied to the problem.

After reaching an intelligent conclusion as to the standards that our appraisal has indicated to be appropriate for our building, we must proceed to the job of familiarizing our planning team with the physical requirements of the building.

The architect knows the legal requirements on the number of men to each plumbing fixture; he probably knows the hot water capacity we will need, and many other such vital factors. However, who should be most concerned with the stability of bathroom fixture mountings, for example? Is it possible that only students at



Michigan State are guilty of occasional roughhousing in the bathrooms and toilet areas? Since I doubt that, it follows that it is our obligation to insist on extra bracing and extraordinarily tough installation of all such fixtures. Otherwise, we shall pay dearly and for many, many years.

The same goes for every other part of the building. We must consider the wear and tear that will be inflicted upon stair rails, risers, treads, landings, stair side and end frames, corridor walls, light fixtures, fire alarm signal boxes, fire alarm bells or sirens, doors, window sills, floors, windows, window screens, and so on indefinitely.

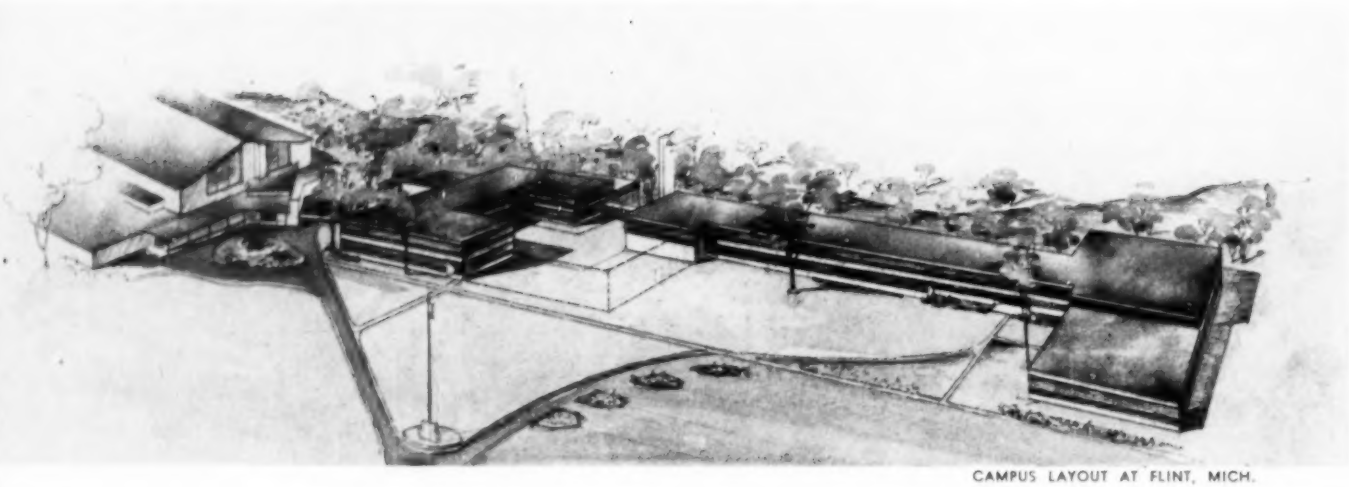
Many times an easily maintained initial job can be done as economically as one that is destined to require regular redecorating or repair. In other cases original costs may be a little higher; in some cases, much higher. Here is where the view of the future is required. Prevision or foresight is absolutely and without question the most valuable of all the characteristics required of enlightened management.

If we believe that an original installation is economically unsound because of probable excessive maintenance costs, we must do our best to sell the top administrators on a better selection of materials, space or equipment, as the case may be. Failure to make the best possible selection results in one of two things—lowered standards or lowered income. I feel pretty sure that management will catch it from all sides in either case.

So we must exercise our scientific curiosity, must question every phase of the plan. Try Kipling's "six honest serving men": Why, What, When, Where, How and Who. Why is it there? Why is it the size it is? What is it for? When do we need it? Where is its use concentrated? How might it fail? Who needs it? These are only a few of the questions we should ask about every feature of the building.

This is common-sense management which, to summarize, advises us to: (1) define the particular function; (2) break it down in detail; (3) question the function for its relative importance; (4) project the future development as it pertains to building layout and construction, and (5) decide on the best physical arrangement, materials to be used, optimum space requirements, and so forth.

From a paper presented at the National Housing Conference, Berkeley, Calif., 1952.



CAMPUS LAYOUT AT FLINT, MICH.

COMMUNITY COLLEGES

1. *Flint Junior College serves threefold purpose*

S. A. NURMI
Architect, Flint, Mich.

THE FLINT JUNIOR COLLEGE IS BETTER DESCRIBED AS A community college. Flint's board of education has long believed that any educational building must serve a threefold purpose. The first and primary concern of our schools is to educate the young in the best possible environment. In this situation, environment is composed of simple but adequate buildings in pleasant surroundings; the best available equipment, and the best possible teaching personnel. The second purpose that our buildings must serve is the education of the adults of the community. Third, these buildings must be available for recreational activities.

For the last 17 years this program has grown to such proportions that it is felt that opportunities for adult classes must be given during the day as well as in the evening. The adult education program has been provided after school hours and in the evenings by the Mott Foundation. Some of Flint's far-sighted citizens have contributed substantial sums of money, scholarships and land to add to the taxpayers' dollars and, hence, this entirely new community college campus has been made possible.

This campus will serve not only Flint but all of the surrounding communities; in fact, the philosophy is that its facilities shall be open to anyone who may desire them.

The site of the campus, donated by Charles Stewart Mott, is an unusually beautiful 35 acres and most suitable for the project. The topography is such that drainage and landscaping problems will be slight. A meandering stream borders the property and its banks are densely covered with various species of large, beautiful deciduous trees. The first of the buildings planned was the William S.

Perspective and floor plan (opposite page) of Science and Applied Arts Building

Ballenger Field House, now under construction. Mr. Ballenger contributed approximately $200,000 for this specific building. The building committee and faculty requested a substantial, functional and definitely flexible building. This houses two regulation college gymnasiums when the bleachers are folded and the accordion wall is rolled out of its storage space. With the bleachers rolled out, there is seating capacity for 2600 spectators and one regulation basketball court in the center. In the center of this court is a hydraulic stage that makes possible spectator sports such as boxing and wrestling. The same stage may be used for auditorium programs of music or drama, a feature that increases the flexibility of the building.

Other rooms are game courts for handball and volleyball, and the like, for both men and women. The locker and shower rooms are housed at each side of the gymnasium and are complete in every detail. The main lobby with check room and soft drink bar gives access to the administration quarters, training rooms, equipment storage for the gymnasiums, outside play areas, and all other essentials for the public.

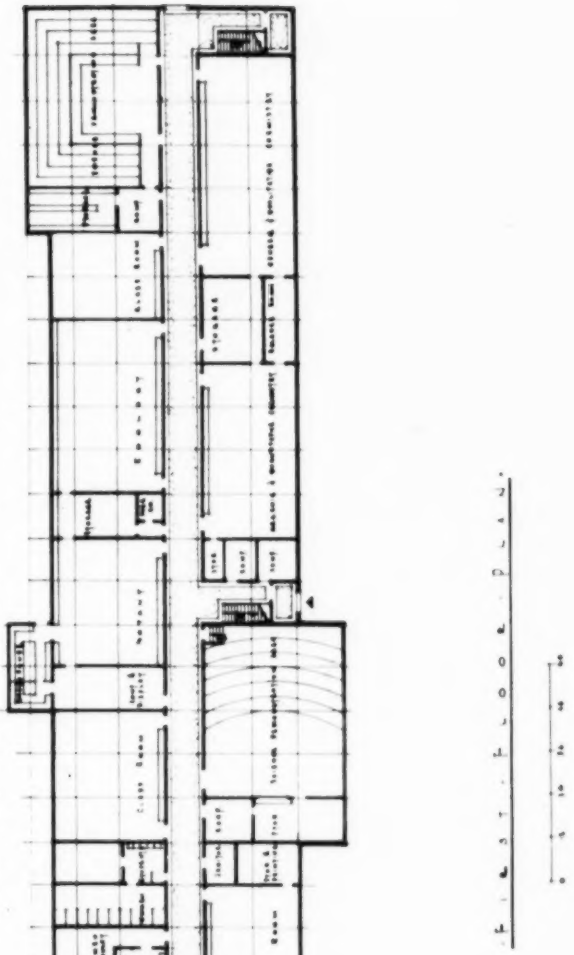
This, as well as the other buildings, is wholly fire resistant. The gymnasium is supported by laminated wood arches and the ceiling is acoustical metal panels. Interior walls are of lightweight concrete aggregate with tile wainscot. Floors are of terrazzo except in the gymnasium and game rooms, where they are of hard wood. Fenestration is largely of directional glass blocks except where outside ventilation demands windows; these are aluminum windows of the awning type, and each is protected by an awning shade.

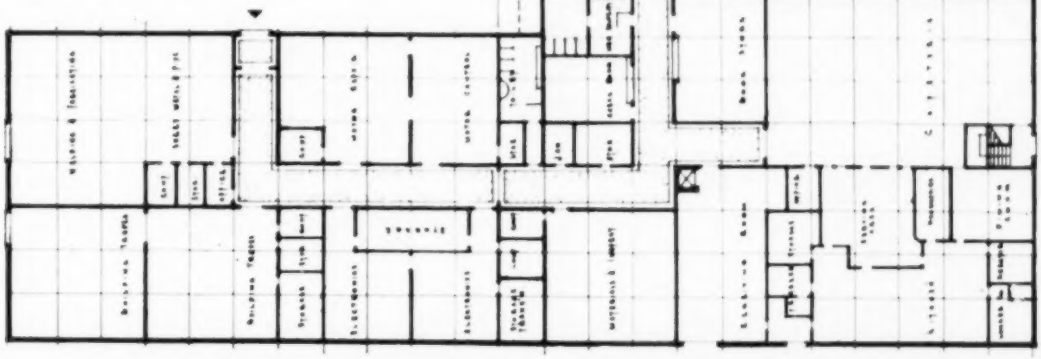
The heating system is floor radiant forced hot water, except in the gymnasium and game rooms, where it is forced warm air.

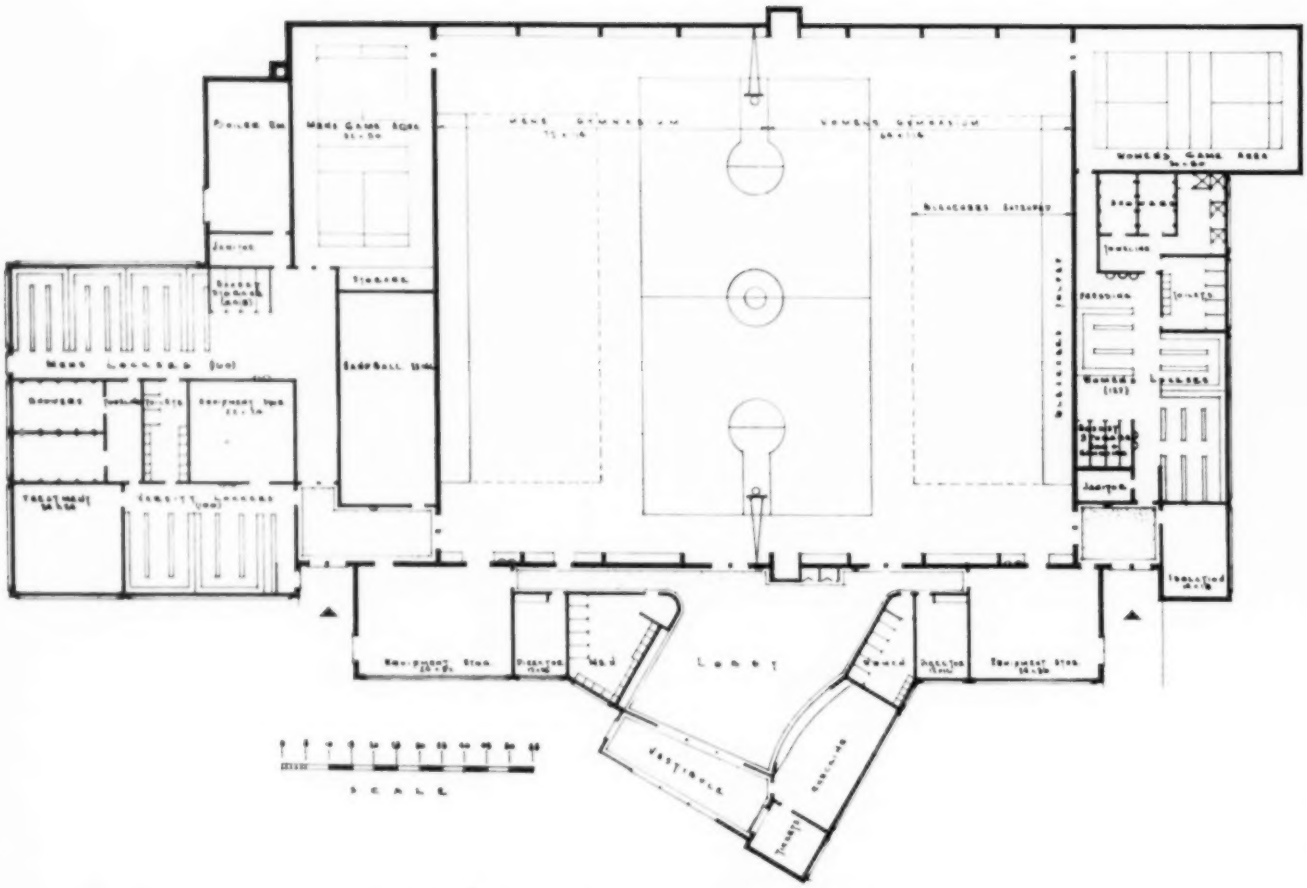
Color selections have been in favor of cheerfulness; for example, the women's locker and shower rooms are in bright pink with blue accents, and the men's quarters are in various tones of green. Exterior brick is a warm gray and this is accented with bittersweet trim of metal panels.

The building will be ready for occupancy this fall. Cost of the structure is $697,000, exclusive of land and landscaping, which is figured at approximately $17 per square foot.

The second of the buildings is the Charles Stewart Mott Community Center of Science and Applied Arts. This is the largest of the buildings and contains 88,000 square feet of floor space. The salient points in this structure are science laboratories—two for chemistry, two for physics, two for biology, two for electronics, two for group demonstrations; a cafeteria, which may be divided for group luncheons, and a divided kitchen to be utilized as a coffee bar as well as for serving luncheons and dinners. Besides the





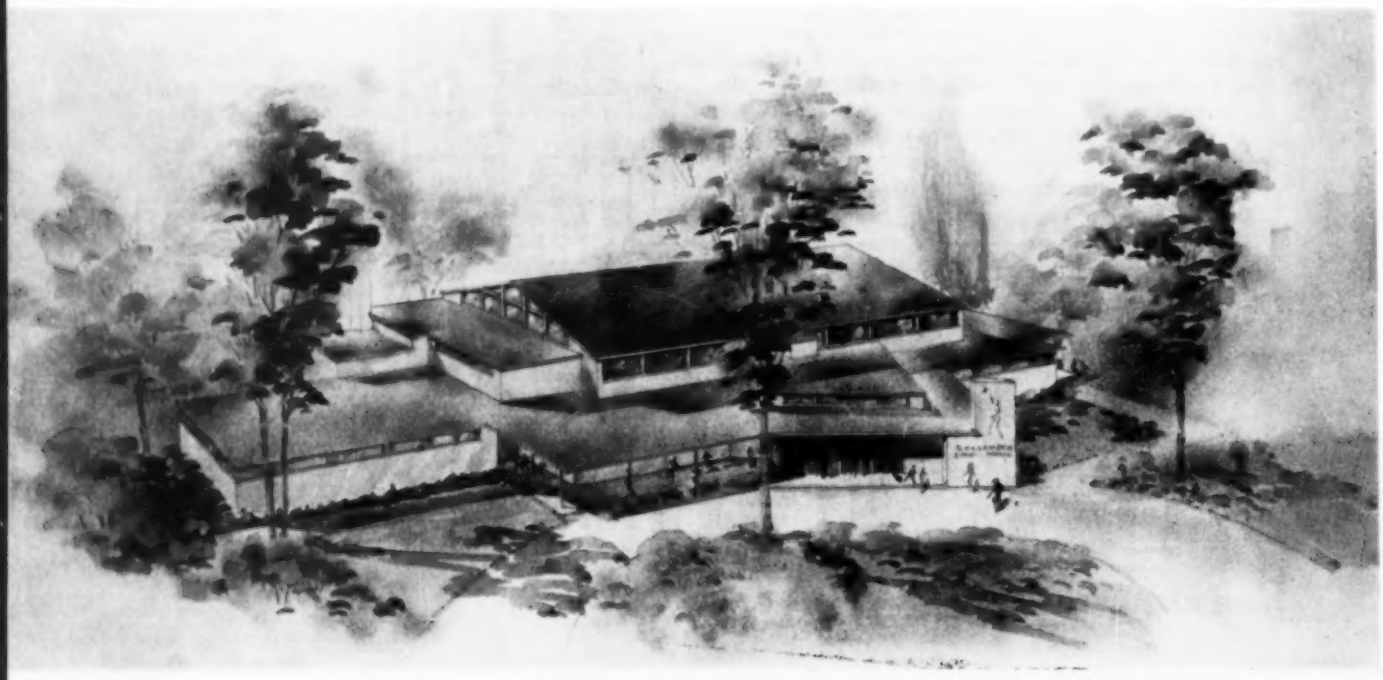


Perspective (below) and floor plan of Ballenger Field House at Flint Junior College

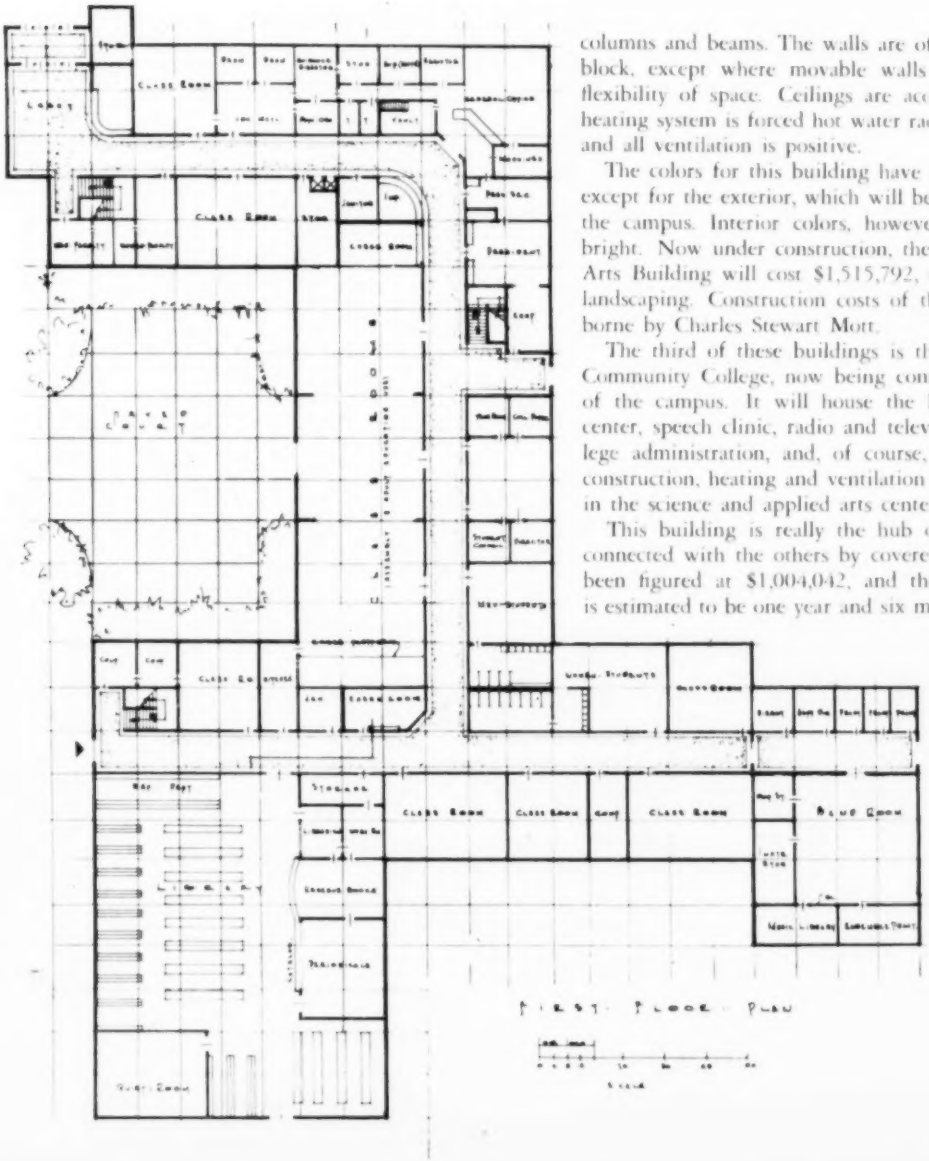
usual classrooms and laboratories for the academic pursuits, much space has been devoted to applied arts.

Flint is generally known as an industrial city and in such a community there is great need for this type of training. The entire design of the building has been pointed to this purpose; therefore, there are quarters for machine shop, welding, precision inspection, carpentry, drafting in its various phases, practical nurse's training, and an art wing that will include space for weaving, painting, ceramics and leatherworks. A community meeting room with a kitchen for social life was deemed essential.

This building is built of exposed reinforced concrete



Perspective and floor plan of Classroom and Administration Building at Flint Junior College

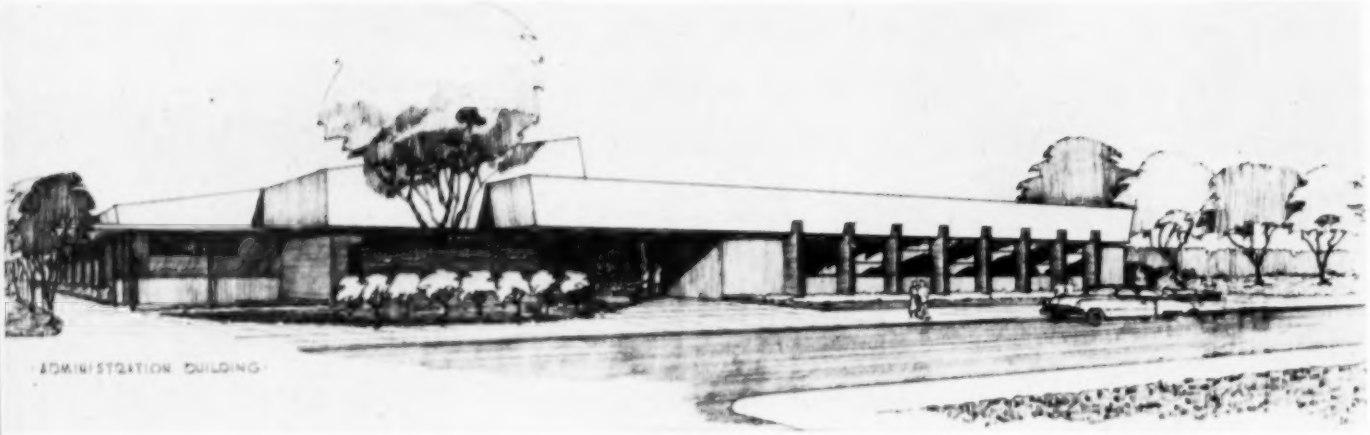


columns and beams. The walls are of lightweight concrete block, except where movable walls have been used for flexibility of space. Ceilings are acoustically treated. The heating system is forced hot water radiant heat throughout, and all ventilation is positive.

The colors for this building have not yet been selected, except for the exterior, which will be the same throughout the campus. Interior colors, however, will be essentially bright. Now under construction, the Science and Applied Arts Building will cost $1,515,792, exclusive of land and landscaping. Construction costs of the building are being borne by Charles Stewart Mott.

The third of these buildings is the Harlow H. Curtice Community College, now being constructed in the center of the campus. It will house the library, student social center, speech clinic, radio and television studios, the college administration, and, of course, the humanities. The construction, heating and ventilation are to be the same as in the science and applied arts center.

This building is really the hub of the campus and is connected with the others by covered walks. Its cost has been figured at $1,004,042, and the construction period is estimated to be one year and six months. Louis C. Kingscott & Associates are responsible for the entire working drawings and field supervision on the project.



COMMUNITY COLLEGES

2. Compton develops its new 80 acre campus

CHARLES E. FRY
Austin, Field and Fry, Architects, Los Angeles

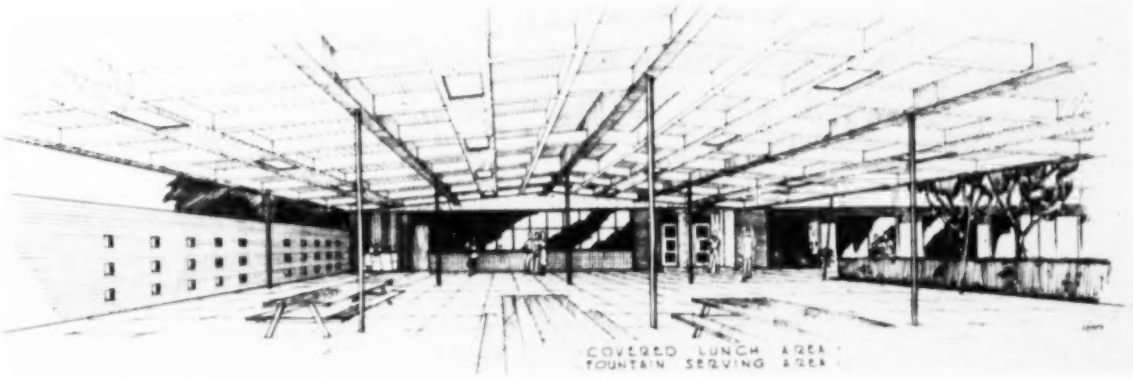
COMPTON COLLEGE LOCATED IN COMPTON, CALIF., founded in 1927, has for the last 25 years shared the campus and buildings of the Compton Senior High School. The college through an interested and expanding community has grown into an institution that now has a faculty of 67 and an enrollment of 2000 day students with 6000 evening and extended day students. Under the direction of the Compton Junior College's board of trustees, an 80 acre site in the southeastern portion of Compton was purchased and a master plan developed for the college.

The program for the completion of the master plan will involve an approximate expenditure, including the property, of $9,000,000. The present budget allows an initial expenditure of approximately $3,500,000 which included the purchase of the property and the construction of the following buildings: administration building; library; classroom buildings providing for academic, business, homemaking, engineering, publications and photography course and lecture halls; buildings housing physical and life science classrooms and laboratories; health service building; men's and women's physical education locker and shower buildings; student activity buildings housing social hall, fountain, store and student government offices; industrial arts buildings providing classrooms and shops for instruction in the building trades, electronics, printing and machinery.

Subsequent buildings will increase the number of basic teaching units and will add arts, crafts and music classrooms, and will include an auditorium and little theater building, cafeteria and men's and women's gymnasiums.

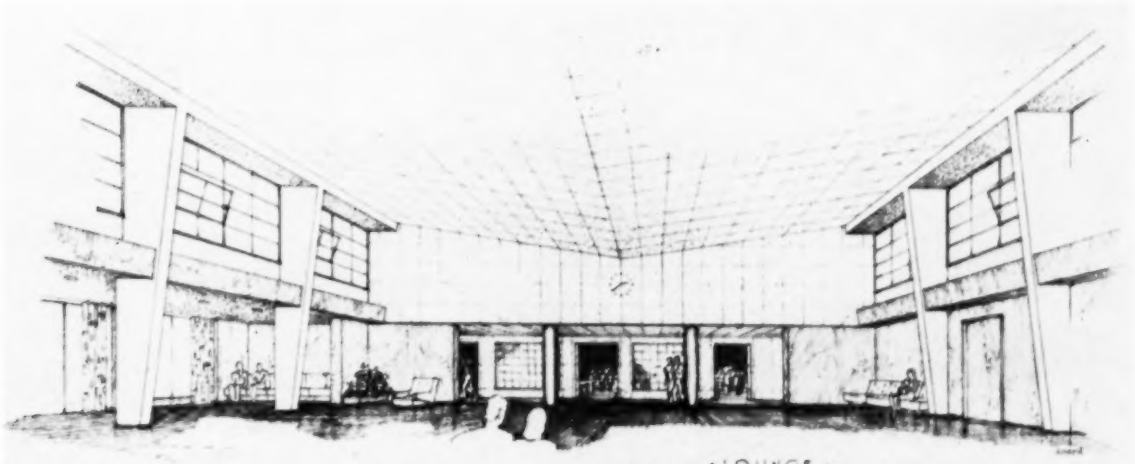
The classroom buildings have one-story single-loading, exterior corridors and are arranged in finger plan form with interconnecting covered walks. The construction is a plastered wood frame with surfaces subject to wear being face brick at exterior areas and plywood and terrazzo at interior areas. Classrooms may be varied in size by multiples of 7 feet by removing specially designed separating dry-wall partitions. Heating is by radiant piping in the concrete floor slab over which is applied asphalt tile flooring. Roofs are gravel and composition with mineral wool

CONVERSATIONAL GROUP AREA
ACADEMIC LECTURE HALLS

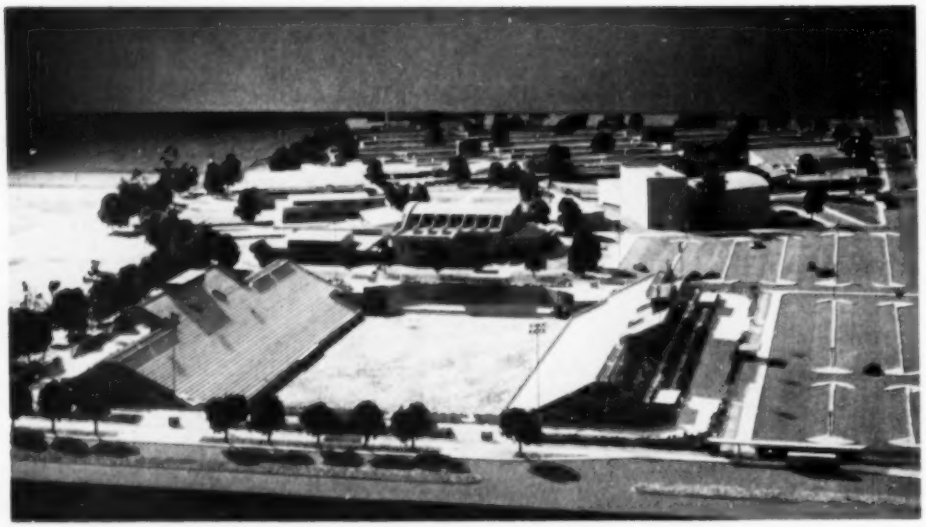


COVERED LUNCH AREA
FOUNTAIN SERVING AREA

Architects for the new Compton College campus are Austin, Field and Fry of Los Angeles. Having much to do in planning the campus and developing a master plan were Dr. Stuart F. McComb, former president of the college; S. C. Hemphill, the new president; Dr. Craig Thomas, director; Robert G. Barnes, business manager; the board of trustees, and faculty members. The State Department of Education also assisted.



LOUNGE
STUDENT UNION BUILDING



Left: Photograph of scale model of future stadium. Below: Administration Building in foreground. Student Union and classroom buildings are in the background.

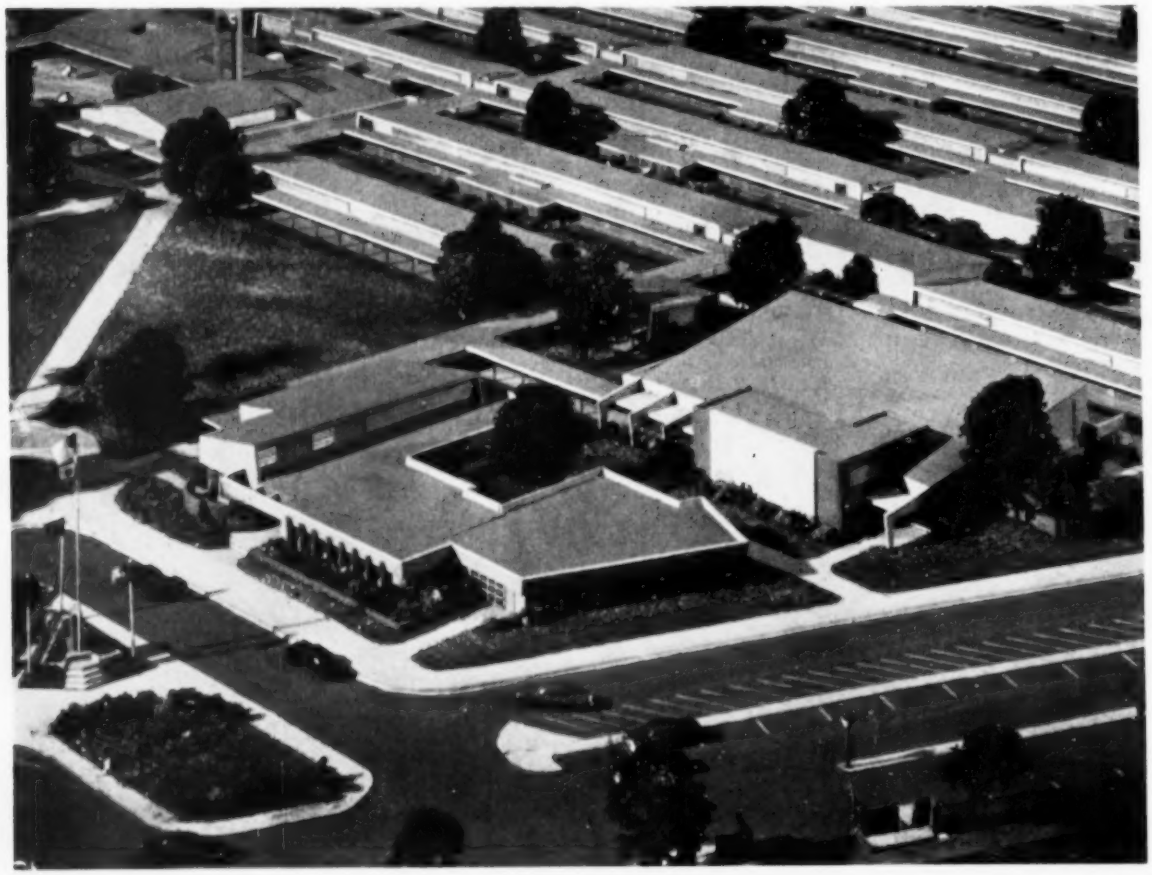
insulation over the ceilings. Acoustical tile is used for ceiling and upper end wall finishes. Corridor clerestory windows have exterior metal louvers for light control.

The campus was planned to accommodate parking for 1200 cars. Delivery and fire protection roads serve all areas of the campus.

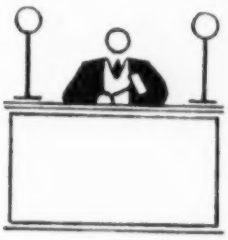
Physical education facilities will include hard surface courts, such as tennis, basketball and volleyball; grassed areas for archery, hockey, football, softball and baseball, and a quarter mile track. Space is provided for a future field and track grandstand to seat 10,000 spectators.

Space also has been allocated for a future cut-and-fill earth stadium to seat 20,000. At the north end of the stadium a stage will be provided for school rallies, graduations and activities and for large community gatherings.

It is planned to build a swimming pool and diving pool later. The pools and the auditorium will be available to the public at times other than that of school usage.



STOCKHOLDERS and CORPORATE GIFTS to COLLEGES



T. E. BLACKWELL
Vice Chancellor and Treasurer
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IT WOULD BE DIFFICULT TO OVERemphasize the importance of a recent decision[1] of the superior court of New Jersey to the endowed colleges of America. Judge Alfred A. Stein, in his 21 page opinion, a treatise on corporate development, education and law, presented the issue with great clarity:

"Stripped to its simplest form, the question calling for decision is whether a new Jersey corporation, organized in 1896 to engage in industry for purposes of profit, may lawfully in 1951 donate from its funds for the general maintenance of an educational institution like Princeton University, private in nature, in the sense that it is privately supported, it being an institution where learning is advanced by the teaching of learned languages, the liberal arts and sciences, architecture, engineering and political science."

The A. P. Smith Company, engaged in the manufacture and sale of water works supplies and valves, with its plant located in East Orange, N.J., received a request in 1951 for a contribution from Princeton University. Its president, Hubert F. O'Brien, as a member of the executive committee of the National Association of Manufacturers, had taken a leading part in the adoption of two resolutions by the N.A.M. in 1948 and 1951, stressing the need for members of the association to give financial support to the privately supported institutions of higher education. The 1951 resolution of N.A.M. declared:

"Essential to the perpetuation of the American way of life is a system of education which includes both privately and publicly supported schools, colleges and universities."

At a meeting of the board of directors of the A. P. Smith Manufacturing Company held in July of 1951, the following resolution was adopted:

"Now therefore, it is resolved that it is in the best interests of this corporation that it join with others in the 1951 annual giving to Princeton University, to the extent of a contribution of $1500 toward the maintenance of the university."

A Princeton University news release was published in the *New York Times* of Sept. 13, 1951, giving the details of the gift. On Sept. 18, 1951, Ruth F. Barlow, a small stockholder, requested her attorney to protest the contribution as *ultra vires* the charter powers of the corporation and to inform the directors that she would regard the gift as a misapplication of corporate funds.

At a special meeting held on Oct. 11, 1951, the board of directors, after careful consideration of the stockholder's protest, resolved not to rescind its action of July 24, 1951, but, on advice of counsel, to seek a declaratory judgment as to the powers of the corporation to make the contribution, and, to defer the payment of the gift to Princeton University, pending a final adjudication. Two other stockholders of the company were made parties to the suit, as well as the attorney general of the state of New Jersey, representing the people of New Jersey and public policy of the state.

RELY ON 1950 ACT

Counsel for the A. P. Smith Company, in their pleadings, relied heavily upon permissive legislation[2] enacted in 1950 by the New Jersey legislature:

"The legislature declares that it shall be the public policy of this state that encouragement shall be given to the creation and maintenance of institutions or organizations engaged in community fund, hospital, charitable, philanthropic, educational, scientific or benevolent activities or patriotic or civic activities conducive to the betterment of social and economic conditions; . . . and to the end that the public policy herein declared may be supported and furthered, corporations organized under the laws of this state . . . unless otherwise provided in its certificate of incorporation . . . shall have power . . . to appropriate, spend or contribute for such purposes such reasonable sum or sums as they may determine; provided, that a contribution shall not be authorized hereunder if at the time of the contribution or immediately thereafter the donee institution shall own more than 10 per cent of the voting stock of the donor corporation or one of its subsidiaries; and provided further, that . . . contributions in any one fiscal year shall not in the aggregate exceed 1 per cent of the capital stock and surplus . . . unless authorized by the stockholders of the corporation. . . ."

Counsel for the stockholders asserted that their board of directors had exceeded the charter powers of the corporation in making the gift, and that the 1950 act of the New Jersey legislature, purporting to enlarge the common law powers of the directors and to assert public policy, was an unconstitutional usurpation of power. In its brief counsel declared:

"We respectfully submit that the question involved is one of great public importance. . . . The basis of our economic system of private industry is the constitutional guarantees of the right of the individual to acquire, possess and protect property, the constitutional protection of the obligation of contracts and the provision that property shall not be taken for public use without compensation; also, the provision of the federal Constitution that persons shall not be deprived of property without due process of law.

"The maintenance of these important constitutional provisions is essential to the continuance of our eco-

[1] The A. P. Smith Manufacturing Co. *v.* Ruth F. Barlow, et al., Docket No. C-1274-51, May 19, 1953.

[2] N. J. S. A. 14: 3-13.1 through 13.3, Laws of 1950, ch. 230 P.L. *p.* 553.

nomic system of private industry. Any failure on the part of our courts to support these provisions in their full vigor may well be regarded as an entering wedge impairing our system of private industry.

"While it is not our purpose to minimize the importance of maintaining privately supported institutions of higher learning, we respectfully urge that the maintenance of our constitutional provisions above mentioned is of infinitely greater importance."

Recognizing the importance of this test case to corporate management as well as to higher education, counsel for the plaintiff corporation called upon two leaders of American industry to testify, Frank W. Abrams, board chairman of the Standard Oil Company of New Jersey, and Irving S. Olds, corporation lawyer and director and, until recently, board chairman of the United States Steel Corporation. Mr. Abrams gave as his opinion that "more and more Americans have come to expect corporations to assume an attitude of social responsibility. . . . The people who own corporations, and the personnel whom they employ to manage them, wish to meet and fulfill this public expectation. . . . They feel that it is not good business for corporations to take substantial benefits from their membership in the economic community while avoiding the normally accepted obligations of citizenship in the social community."

Mr. Olds declared: "The corporations in this state will suffer if, in the future, these educational institutions should be allowed to wither away, decay or, perhaps, to disappear because of lack of funds to carry on their important educational functions. . . . Every American business has a direct obligation to support the free, independent, privately endowed colleges and universities of this country to the limit of its financial ability and, unless it recognizes and meets this obligation, I do not believe it is properly protecting the long-range interest of its stockholders, its employes and its customers."

Thus the issue was sharply drawn. Judge Stein, in his scholarly opinion, admitted that: "This controversy presents questions of transcendent importance, the solution of which is not without considerable difficulty. . . . It is settled law here and in England that a corporation or association possesses not only those powers which are expressly conferred upon it by charter, franchise or articles of association, but also all incidental powers reasonably designed or required to give fuller or greater effect to the expressed powers. . . . Anything that tends to promote with the public a company's good will is a reasonable measure toward the corporate objective of earning profits. It is this philosophy which moved Congress to allow corporations to give up to 5 per cent of their earnings to any established or recognized charity or educational institution.

"There is also the broader question here involved, namely, that the contribution here in question is toward a cause which is intimately tied into the preservation of American business and the American way of life. Such giving may be called an incidental power, but when it is considered in its essential character, it may well be regarded as a major, though unwritten, corporate power. It is even more than that. In the court's view it amounts to a solemn duty.

"Now as to the constitutional question, *i.e.* . . . that the legislation here in question impairs the obligation of contracts, deprives the defendants of property without due process, and, finally, constitutes a taking of private property for public purposes but without compensation, I do not regard these objections as tenable. The granting of the charter by the state to the plaintiff company has at all times been subject to the reserved power of the state to alter, suspend or repeal the same, in the discretion of the legislature.

"Finally, the legislation challenged in this case is clearly sustainable under the police power reserved to and residing in each state. The police power of a state is an inherent attribute of its sovereignty with which it is endowed for the protection and general welfare of its citizens, and of which the state may not divest itself by contracts or otherwise.'"[3]

In sustaining the constitutionality of the New Jersey Act of 1950, Judge Stein impliedly sustained the validity of similar legislation in 22 other states.[4] Hence the national importance of his decision. Counsel for the stockholders has informed me that an appeal will be taken directly to the New Jersey Supreme Court. Since a federal question is also involved, it is possible for the case eventually to be argued before the Supreme Court of the United States.

In discussing this problem of the stockholder and corporate support of higher education, Laird Bell,[5] senior partner of one of Chicago's largest law firms and chairman of the governing boards of Carleton College and the University of Chicago, had this to say: "Unless support comes from private sources it seems inevitable that it will come from public sources. That government should be the sole support of education, or even its major support, is a prospect to alarm those who believe in private enterprise."

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[3] 12 C.J. Para. 603, p. 991.
Boston Beer Co. *v.* Mass., 97 U.S. 25.

[4] Arkansas 1951, California 1944, Colorado 1947, Delaware 1943, Illinois 1949, Indiana 1949, Maine 1951, Maryland 1951, Massachusetts 1948, Michigan 1949, Minnesota 1949, Missouri 1946, New Mexico 1951, New York 1950, North Carolina 1945, Ohio 1945, Oklahoma 1949, Pennsylvania 1945, Tennessee 1925, Texas 1917, Virginia 1945, West Virginia 1949.

[5] Bell, Laird: Corporate Support of Education; The Legal Basis. American Bar Journal, Vol. 38, No. 2, p. 119. February 1952.

Health Service Facilities

. . . are becoming a significant concern of college administrators in providing the proper environment for students. Results of a national survey of college health service facilities by Higham, Neilson, Whitridge and Reid, Inc., will be published in the October issue.

Survey of small schools reveals methods of administering

MAINTENANCE PROGRAM

GENE STANFORD
Bursar
University of Tennessee

IN A STUDY OF THE MAINTENANCE program of the small school, the first question that naturally arises is: How large *is* a small school? As determined from the 31 questionnaires used in the study, the typical small school in our southeastern area has an average fall enrollment of 619 students, a faculty of 49 instructors, and a campus with an area of 85 acres. Enrollments varied from 175 to 1500; faculty from 16 to 111, and campus from 10 to 375 acres. The enrollment limit of 1500 was arbitrarily set.

In the 11 southeastern states I found that, of the 310 colleges and universities, 270 were under 1500 (1951). I sent questionnaires to 80 of the 270 at random. Four institutions returned questionnaires showing enrollments of more than 1500, so I omitted these from the study. Besides these four, there were 10 that came in too late to use.

The questionnaire revealed a variety of methods of administration of the maintenance program. The first question was: What is the title of the person administering the program? Fourteen reported superintendent of buildings and grounds department; 4 superintendent, buildings and grounds (no department—in business office); 1 superintendent, physical plant department; 1 plant superintendent; 1 head, plant operations department; 1 director of maintenance; 1 building engineer, for a total of 23 superintendents or equal. Five reported business manager; 1 controller, and 1 assistant to the president, for a total of 7 business managers or equal. One reported the president as the person administering the program.

The second question was: To whom is he responsible? Nineteen super-

Summer renovation work is part of the program calling for careful advanced planning. Usually six months' work must be completed in the short span between summer school and the fall opening.

intendents of buildings and grounds (or equivalent) are responsible to the business manager (or equivalent); 4 superintendents of buildings and grounds are responsible to the president; 7 business managers are responsible to the president. One president runs the program himself.

As for training, 9 who administer the program have as much as a B.S. degree, 5 have at least two years in college, and 13 have experience in business, industry, construction and trades. Two of the degree men have degrees in mechanical engineering, 3 in business administration, and 1 has his Ph.D. pending. Most of the degrees belong to the business managers who administer the program.

In 21 schools there was a separate buildings and grounds department. Ten had the functions in the business office. Of these 10, 6 were in schools with enrollments of 400 or less.

Nine schools had a faculty buildings and grounds committee. Six of these were in schools with enrollments of more than 650. Of the 9, 6 reported the committee "not very helpful"; 2, "very helpful." (The other didn't care to say what he thought!)

Four institutions had campus police; 26 had night watchmen. The average number of workers, skilled and unskilled, was 26, varying rather consistently with the enrollment. Only 4 gave training courses for their custodial crew. Twenty-five assigned their building custodians definite areas to clean from 75 per cent to 100 per cent of the time. Three used "floating crews" entirely.

NO LABOR UNIONS

There were no union labor problems because none of the schools had unions on the campus.

To the question, "To what extent do faculty members supervise the custodians serving their areas of instruction?" the following answers were given: none, 17; little, 2; 25 per cent, 4; 50 per cent, 3; 75 per cent, 1. One answered "too much."

To the question, "Do you have a service building especially designed for the purpose?" 14 answered No; 2 said No, but adapted; 3 said No, but good, and 11 answered Yes.

Nine schools had a motor pool. Only 1 had a full-time auto mechanic. In 8 instances all car travel was done in private cars; in another 12 cases, a large per cent was so done. The rate paid per mile varied as follows: 6, 5 cents; 15, 6 cents; 2, 7 cents; 2, 7½ cents. (Incidentally, these will not always add up to the 31 schools. The amount lacking is the number not answering the particular question.)

Approval of travel is shared about equally by the president, business manager, and the department heads. Only five schools keep complete cost records on the vehicles; others, mostly simple records.

Three institutions had their own water supply. Electric power for all came from outside sources. Source of heat was as follows: coal, 19; gas, 8; coal plus oil, 3; oil, 1.

No definite picture was found in the heavy equipment possessed. The typical institution had 2 or 3 trucks, a tractor, and a fairly well equipped shop. Three had rototillers for their campuses, 3 had leaf gatherers, 2 had leaf pulverizers, and 4 indicated they owned loaders.

Maintenance work for the various enterprises at the institution was done by the buildings and grounds department in the majority of cases: 26 did

maintenance for cafeteria; 25 maintained the athletic field; 29 maintained residence halls. The expense of this maintenance was charged or absorbed by the department as follows: 15 absorbed charges; 1 absorbed charges, except the cafeteria; 10 charged the enterprise; 1 charged, except the athletic field; 1 charged two-thirds of the expense.

The average maintenance budget was 14.8 per cent of the total college budget, detailed as follows: 9, 10 to 13 per cent; 10, 14 to 16 per cent; 5, 17 to 22 per cent.

PURPOSE, PROBLEMS, POLICIES

Before proceeding with a review of the problems mentioned in the questionnaires, I think we need to define the purpose of the buildings and grounds department in the small school. John Kreinheder in his article in the July 1951 issue of COLLEGE AND UNIVERSITY BUSINESS gives a good definition. He says: "The department of buildings and grounds is thought of as that agency which, with some degree of proficiency and dependability, houses, warms, lights, cleans and otherwise services and protects the various college activities." From his efforts to carry out this purpose, the superintendent's problems arise.

In the small school the administration of the maintenance program many times is in the hands of the business manager, or similar official, either entirely or to a greater or lesser degree. As he can, the business manager seems to wish to delegate more and more of the work to the superintendent. Therefore, in discussing maintenance problems the point of view of the business manager must not be omitted. One of his problems may be solved by actually employing a competent superintendent of buildings and grounds.

GETTING THE RIGHT MAN

My personal opinion is that more successful maintenance can be expected from a competent superintendent of buildings and grounds than from a competent business manager. Getting the right man for the job of superintendent of buildings and grounds may bring with it the solution of many other problems.

The task of hiring the right superintendent of buildings and grounds should be approached, I think, by first determining the skills needed to run the program. Most schools need the skills and services of firemen, plumbers, carpenters, painters, electricians, mechanics, steam fitters, night watchmen, grounds caretakers, and building custodians or janitors. The small school in many cases does not need—nor can it afford—one each of the more skilled workers. The solution, then, is one of employing "dual purpose" workers: a carpenter who also can paint, a plumber who also can fire the heating plant, or a mechanic who also can do electrical work. The alternative to the "dual purpose" method is that of contracting for the work of skilled men needed only part time or occasionally.

In the small school this "dual purpose" idea may even apply to the superintendent of buildings and grounds, who may be, as in our case, the heating plant engineer. Assuming that to be true, the superintendent of buildings and grounds may need a maintenance foreman, a semiskilled grounds specialist, and a custodial supervisor for the janitor work. The maintenance foreman also might be the skilled mechanic

and electrician; the groundsman, the carpenter, and the custodial supervisor, the painter. If sufficient work allows, the full-time worker can be hired. One school with 160 pieces of rental property uses a skilled carpenter full time to advantage. Another school keeps a crew of three painters busy all year, working inside and out.

The "floating crew" type of labor pool helps solve the problem of need for temporary helpers. As needed day by day, these men are assigned, returning to the pool for further assignment when no longer needed, available for emergencies as a group. Were these men permanently assigned to the carpenter, the electrician or groundsman, no such flexibility could be achieved. The "floating crew," therefore, is a group of temporary help steadily employed.

FACULTY-STUDENT RELATIONS

Even a carefully selected, thoroughly trained staff does not eliminate all the problems besetting the superintendent of buildings and grounds. A constant source of problems is those groups of people known as faculty and students! How serene his day would be were there no faculty and students! No complaints from instructors that their building is too hot, with a simultaneous complaint that the same place is too cold; no pressures from everyone to "do my work first"; no students to litter the campus and remote corners of the buildings with soft drink bottles or whose nocturnal behavior exasperates the most patient night watchman; no problems from those dormitory raids. No problems, no worries, but without students and faculty, no school, and no job! So, the welfare of the student first, and the faculty second, seems to be the consideration of the superintendent of buildings and grounds.

It would seem, therefore, that the superintendent of buildings and grounds in the small school needs a public relations officer. Unable to afford one, he must of necessity be one himself. He should be able to make a shivering faculty member feel comfortable and satisfied in a cold building. He must sell his staff the idea that its job is primarily not one of firing or cleaning or repairing, but one of *serving* the students and faculty of the institution.

To obtain the faculty point of view, a faculty committee of buildings and grounds may be one solution. On this committee could be the president, business manager, and superintendent of buildings and grounds. The department heads of engineering and agriculture may make desirable members. This committee could set policies and priorities for maintenance work and projects, especially the major ones. With the faculty point of view represented, pressure on the plant staff is relieved, faculty confidence is gained, and mutual benefits result. Our school has had a successful experience with this type of committee.

To gain the benefits of the student point of view, in at least one school a student-faculty cooperative committee has been employed with outstanding results. Meeting weekly, it receives complaints from both students and faculty. Frank discussions are conducted on existing problems resulting in mutual benefit to the maintenance effort and to the student body.

WORKER MORALE

We now come to another problem experienced in the small school when funds do not always permit the hiring of high type workers, particularly custodial or janitorial workers. Poor pay usually means poor work. Herein lies a hint as to the solution. One of the best ways to show appreciation for work well done is in the pay envelope.

Other suggested methods of improving worker morale given in the survey were: (1) banquets for the workers; (2) Christmas party; (3) talks by the president; (4) uniforms furnished; (5) more time off; (6) no Saturday work; (7) free admission to athletic games; (8) encouragement of suggestions about the work; (9) team status in regard to the work; (10) dignifying of the work; (11) fair and impartial treatment, and (12) better training on the job.

Another personnel problem in the small school maintenance program mentioned in the survey arises from overlapping duties and responsibilities, unavoidable in many cases because of the use of dual purpose workers. Insofar as possible, it seems desirable to make clear who is "head man" in various situations. A cooperative atmosphere rather than a so-called competitive one should be encouraged among workers. A definite line of responsibility is certainly desirable but is more difficult to obtain in the small school where president and business manager are so close to the maintenance program that it is easy as well as tempting to assist the superintendent of buildings and grounds with his part of the program.

A program of preventive maintenance is recommended; that is, find and prevent the accident or breakdown before it happens. That calls for periodic inspections by the business manager and superintendent of buildings and grounds, who have worked out a program in black and white indicating points and places to be checked so as to find and repair weak spots before serious trouble occurs.

The summer renovation work is a part of the program, calling for careful advanced planning. Usually, six months' work must be completed in the short span between summer school and the fall opening.

SMALL SCHOOL, SMALL TOWN

The institution in a small town or rural location finds the need for more self-sufficiency in its maintenance methods. Certain skilled men cannot be hired as needed and must therefore be retained on the staff. Certain supplies, repair parts, and machinery are not available locally and must be stocked or owned by the institution. Many a small school in a small town finds itself in the quandary of being too large to do without and too small to possess the means.

In summary, I wish to list the outline used by Wendell M. Tutt in his article published in the June 1952 issue of COLLEGE AND UNIVERSITY BUSINESS. To achieve a good maintenance program in the small school, Mr. Tutt gives the following fundamentals: "(1) Possess a competent and conscientious superintendent of buildings and grounds; (2) employ the best staff obtainable at satisfactory wages; (3) treat your staff members like human beings; (4) provide the staff with good tools, equipment and supplies; (5) plan annual and seasonal work and special projects carefully and in advance, and (6) follow through with good guidance and supervision."

From a paper presented at the southeastern regional meeting of the Association of Physical Plant Administrators.

NEW UNIT FOR FOOD SERVICE

brings freshman and upper class students together at Simmons

MARGARET FAIRCHILD
Manager of Residence and Executive Dietitian
Simmons College, Boston

INSIDE MAIN ENTRANCE (EXTERIOR AT TOP)

THE NEED FOR A NEW FOOD SERVICE unit at Simmons College had been felt for a long time, and was a necessity if the freshman and upper class campuses were to be combined. This move was considered of great value since the freshman campus, located in the town of Brookline, was approximately a mile from the main building.

In 1951 Arnold Hall, which houses 118 students, was constructed. Shortly after it was completed plans were made to build two more residence halls and a food unit. The old refectory will be redecorated and then will be used as a recreation room.

The new buildings were designed by the Austin Company of Cleveland and Boston, in cooperation with officials of the college, and are cinder-block construction. The outer walls are the same type of brick used in previous construction.

The new food unit is called Bartol Hall in honor of Dr. John Bartol, a former member of the corporation. The main entrance is on the southeast and is connected by a hall with the future recreation room. Another entrance on the opposite side opens on a parking lot and the street where deliveries are made. This also provides an access for students living on that side of the campus.

Just inside both entrances are coat rooms with built-in coat racks. The one on Brookline Avenue has a restroom for women which has tan ceramic tile and matching paint. The men's room located in the hall has pearl gray tile walls.

The entire food unit has a total floor space of nearly 10,000 square feet. The dining room, 123 by 40 feet, seats nearly 500.

Three exposures in the dining room ensure ample light and air. As much as possible was done from a decora-

tive standpoint to have the buildings bright and cheerful. Vinyl plastic tile in a marbleized effect of off-white and black was used on the floor. This provides the hard surface necessary to withstand the constant use the room will have and to prevent indentations caused by tables and chairs in rubber and asphalt tile. Red quarry tile was used on the kitchen floor.

Red birch with a natural finish was used for all windows, door casings, and a 4 foot paneling on dining room walls. The paneling was installed primarily as a protection for the chairs when they were pushed against the slightly rough textured surface of the cinderblock walls. An unusual effect was achieved with grayed, blue-green walls above the wood paneling. Terra cotta was used above the paneling in the coat rooms.

Spruce green ceramic tile was used on the serving room walls and butternut tile on the kitchen walls where it extends to the ceiling, which is off-white.

The dining and serving areas were soundproofed, but the kitchen was not because the steam and vapors prevent entire satisfaction. This can be done later if desired.

Both fluorescent and incandescent lighting were installed with controls so that either or both types may be used.

Since the kitchen has only two windows, a ventilation system that gives a change of air every four hours was installed. The mechanism for this and the refrigeration system is in a balcony over the kitchen.

Dining tables are 36 inches square and are laminated plastic on picture wood in a grayed tan with black flecks. Picture wood was used in preference to real wood because it is more controllable and is also less expensive. The framework of both tables and chairs is birch with a natural finish. These blend well with the paneling. Green plastic was used for the chair seats. For the time being two tables will be pushed together to seat six. Eventually, when maximum capacity is required, the tables will be separated and placed on a diamond floor plan. In this manner nearly 100 more may be seated.

Two duplicate serving counters give faster service for the cafeteria meals. Formerly dinner was served family style with a resident head or student acting as hostess. Because of the smaller tables, plate service is now

Looking toward vegetable, scullery and salad units.

Looking toward stoves and ovens. Bakeshop is beyond.

One of duplicate serving counters for cafeteria meals.

Dining room in Bartol Hall seats approximately 500 now with two tables pushed together to seat six. When maximum capacity is required, the tables will be separated, placed on a diamond floor plan, thus seating 100 more.

used, the student waitresses getting the plates for their tables at the serving counters.

Counters are L-shaped and are 24 feet long. The first section provides three stacks of trays and is followed by a four-section hot counter, a four-foot cold section with glass shelves above for desserts, a milk dispenser with space for trays of glasses, a four-container ice cream cabinet, and space for water glasses, the cooler being recessed in the corner of the wall just above the counter. Space also is provided here for serving coffee from a low-boy type of urn, which is just past the turn in the counter. Between the coffee urn and the back wall is a small utility sink. The lower portion of the counters has cabinets and drawers for dishes and serving tools.

Orange juice dispensers and large electric toasters are on the back bar, the lower portion providing additional space for dishes and bread.

Two-way electric food warmers and refrigerators are in the wall between the back bar and the door to the kitchen so that food is available with a minimum of labor involved in transporting it to the serving rooms, as well as keeping it in better condition for serving.

The entire kitchen area, including the serving rooms, is approximately 74 by 60 feet. The dishroom is 18 by 13 feet and separates the serving rooms. The window for receiving soiled dishes is recessed in an alcove in the center front. Four swinging doors provide traffic ways into the dining room. A wall extends in front of these doors so the dish window is not visible from the dining room and the noise is decreased.

The soiled dish table extends across the front, both ends and part of the opposite side of the room. Two machines provide separate units for washing glasses and dishes. The remaining equipment there includes a prewash sink, utility sink, a waste pulverizer, silver machine, dish table, and truck.

BAKESHOP EQUIPMENT

The bakeshop is 12 by 23 feet and is at the center of one end of the kitchen area. The equipment includes an iron pan rack, baker's table with bins, trunion kettle, stove, two deck ovens, proof box, landing table, a mixer, refrigerator, sink and hood.

The main cooking unit is in the center of the room. The equipment consists of a refrigerator, two cooks' tables, one with bain-marie and sink, butchers' block, meat slicer, pan rack, broiler, two deep fat fryers, two ranges with grill tops, two with solid tops, two portable tables, two worktables, and an 80 quart electric mixer; three steam kettles (25, 40 and 60 gallons); two steam chefs and hood.

All pieces of equipment in this unit are located in one double line, the stoves being back to back in the center, and six single lines across the room between the walk-in refrigerators and serving rooms. This gives direct passageways between the various units with a minimum of steps.

At the end of the room opposite the bakeshop are three U-shaped units: the vegetable preparation with potato peeler, one double and one single sink, drainboards and pan rack.

The salad unit is in the section nearest the serving room and has a large refrigerator, a sink with drainboards, and table space equipped with under shelves and drawer.

All kitchen equipment is stainless metal where possible. The sinks, back bars, and drainboards are sealed to the walls, making cleaning and maintenance much easier. The employes' dining room, dietitian's office, walk-in refrigerators, daily storeroom, and an outside entrance are arranged along the back of the room.

The meat refrigerator is 10 by 7 by 7 feet and is in front of the freezing compartment, which is 5 by 7 by 7 feet. The only access to the freezing compartment is through the meat refrigerator.

The vegetable refrigerator opens into the kitchen and is 8 by 7 by 7 feet. The dairy box, immediately back of the vegetable compartment, is also 8 by 7 by 7 feet. It is opposite the dietitian's office and opens onto a hall connecting the kitchen and the recreation room. From this hall is a stairway to the basement where the employes' locker rooms and a large staple storeroom are located. Near this storeroom is a conveyor for moving food upstairs where it is unloaded in the daily storeroom. A paper chute just outside the storeroom connects directly with the incinerator in the basement.

In the outside entrance is a refrigerated unit for garbage and a washer for the cans. Most of the garbage can be disposed of in the disposal apparatus in the dishroom, the refrigerated unit taking care of that portion to be held and picked up by garbage men.

The loading platform, on a level with truck beds, is accessible to both kitchen and basement, making deliveries easy.

Bartol Hall has been used by upper class students since January, but the freshman and upper class campuses will be combined this fall.

Mississippi State food service department

SIMPLIFIES STOREROOM CONTROL

PERCY BAKER
Internal Auditor
Mississippi State College
State College, Miss.

THE FOOD SERVICE DEPARTMENT AT Mississippi State College is made up of three operating units, namely, the college cafeteria, grill and fountain. Three service units—the bakery, butcher shop and warehouse—support them. Each operating unit is headed by a manager who is responsible to the director of food service, who, in turn, is responsible to the controller. The accounting records of the department are maintained in the controller's office under the immediate supervision of the college internal auditor.

Owing to the geographic location of State College, Miss., we are required to maintain a food inventory valuation of approximately $37,000 in our warehouse. We have developed a system of internal control over this inventory that is simple, economical and, at the same time, effective.

ACCOMPLISHED BY TWO METHODS

The basic objective of any system of storeroom control is to provide a means of determining the accountability of the storekeeper at any given time. This can be accomplished by perpetual inventory records or by maintaining a dollar control system where the dollar valuation of the inventory is known at all times but where no attempt is made to account for the individual items making up that inventory.

We at Mississippi State College prefer the dollar control system for food storerooms because of its simplicity of operation as against the laborious and costly task of maintaining perpetual inventory records.

It is true that the perpetual inventory method has certain advantages,

FOOD SERVICE DEPARTMENT
DAILY REPORT OF WAREHOUSE INVENTORY DATE _____ STOREKEEPER _____

	Beginning Inventory	Purchases	Bakery	Cafeteria	Grill	Athletic	State Fountain	Homemade Candy	Misc. Amount	Total Issues	Ending Inventor
MEAT											
STAPLES											
PRODUCE											
DAIRY - OTHER											
DAIRY											
BAKERY											
SOFT DRINKS											
TOTAL FOOD											
CANDY & TOBACCO											
HOME MADE CANDY											
SUPPLIES											
CHINA, ETC.											
TOTALS											
Accumulated Issues											
Accumulated Bakery Issues											

State Fountain

Dairy _____ Home-Made Candy _____
Dairy-Other _____ Supplies _____
Bakery _____ China _____
Candy & Tobacco _____ Total _____

Daily report of warehouse inventory used at Mississippi State College.

the principal advantage being that you can maintain maximum and minimum quantities of the individual items in the inventory. Also, in case of a shortage, the particular item missing can be determined. However, we have found that with a little experience and initiative the storekeeper can maintain his stock by visual inspection, and we believe that no more can be done with the knowledge that three cases of beans are missing than can be done with the information that the storeroom is short $25. Either information will indicate that the storeroom is short and that remedial action is necessary.

We maintain an average food inventory valuation of approximately $37,000. This inventory is controlled through four employes and three forms. The employes include the storekeeper, a butcher, a colored porter, and a clerk who spends approximately half his time on inventory work. The forms include a receiving report, which is a carbon copy of the purchase order issued by the purchasing department, a daily warehouse report, and the requisitions used by the operating units in ordering merchandise from the storeroom.

PROCEDURE FOLLOWED

Our procedure for the control of our food service storeroom is as follows:

Purchasing. All buying is done through the institution's purchasing department, with the exception of small local purchases of an emergency nature. All merchandise is purchased through sealed bids to comply with the state law and to ensure obtaining the best price available. To facilitate costing in the storeroom, every effort is made to obtain prices f.o.b. destination so that the additional freight charges will not have to be added to the unit price in the storeroom.

When the purchasing department issues a formal purchase order, it also prepares a carbon copy known as the receiving report, which is forwarded directly to the storeroom. This is filed in the outstanding order file until the merchandise is received.

Receiving. When the merchandise is received in the storeroom, the quantity and quality are compared with the receiving report and any discrepancies noted thereon. To control the ages of merchandise, each case, barrel or other unit is dated as it is received. As soon as an invoice is available, the invoice terms are compared with those on the receiving report and the case or package price is stamped on each case.

STAMPING PRICE IMPORTANT

Stamping the price on each case is important as it simplifies the taking of a physical inventory; moreover, the storekeeper can automatically know

the cost price when the merchandise is issued. Since the operating units customarily requisition merchandise in case lots, it is necessary only to stamp the cost price on each case.

We have a small area in the storeroom set aside for broken cases. When it is necessary to issue merchandise in quantities smaller than a case lot, the remainder of the case is transferred to this area, and the unit price is stamped on each unit.

Issuing. The storekeeper cannot issue merchandise from the storeroom unless he receives a warehouse requisition based on approved meal menus and signed by an operating unit manager. The requisition shows the merchandise and the quantity wanted. When the storekeeper fills the requisition he then fills in the unit price, which has been stamped on the case or unit, without having to check back into his files to obtain the unit price.

Daily Warehouse Report. Each day the storekeeper prepares a warehouse report that is forwarded to the controller's office for audit and entry into the accounting records. The report is supported by the receiving reports and a copy of each warehouse requisition issued during that day. On the back of the report he lists the vendor's name, the purchase order number, and the invoice amount for each shipment received.

In order to facilitate the taking of a physical inventory, the total inventory is broken down into several categories, namely, meat, staples, fruits and vegetables, milk, candy and tobacco, supplies and china. Each purchase order is extended to the proper category on the back of the report. The report is then totaled and the totals are transferred to the purchase column on the front of the report.

The warehouse clerk separates all of the warehouse requisitions for the day by operating units, extends the prices, and totals the issues by inventory categories. These totals are then placed in the appropriate issues column on the front of the report. By adding the purchases to the beginning inventory and by subtracting the issues, we have the ending inventory on hand at the close of each day by category as well as in total. This makes it possible to take a physical inventory of meat today, staples tomorrow, and so forth, instead of having to start and complete the whole inventory at one time. It also enables the internal auditor to make spot tests on inventory at his convenience. After this report is audited and the appropriate accounting entries are made, it is filed, and the back of the form automatically becomes the accounts payable subsidiary ledger.

CONCLUSION

The internal control under the foregoing system is strong. In the first place, all buying is done through the college purchasing department. This ensures the lowest possible prices and removes the buying element from the storeroom. Problems peculiar to purchasing for the food service department require closer cooperation between the purchasing agent and director of food service, however, than is usually required with other college departments. Second, the controller's office will not pay for merchandise bought for the food service department unless it is reported on the daily warehouse report and picked up in inventory. Third, the storekeeper must have a requisition signed by an operating unit manager to account for each issue from the storeroom. Finally, we know at any time the dollar value of the inventory on hand in the warehouse.

We at Mississippi State College believe that we have arrived at a simple, inexpensive and practical solution to the problem of storeroom control.

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NEWS

Review Educational Bills Introduced in 83d Congress . . . Korean Veterans Must Enroll Before August . . . $50 Million More for College Housing . . . Fourteen Colleges Refuse to Sign A.F.I. Contract

Raymond P. Sloan Heads Publishing Company

Raymond P. Sloan

Raymond P. Sloan, vice president of The Modern Hospital Publishing Company for the past several years, has been elected to the presidency of the company to succeed the late Dr. O. F. Ball, president and founder of the company. The Modern Hospital Publishing Company, through its Nation's Schools Division, publishes COLLEGE AND UNIVERSITY BUSINESS.

Mr. Sloan first joined the company as associate editor of *The Modern Hospital* and was editor of that publication for many years. He was managing editor of *The Nation's Schools* until September 1947 and was for many years editorial director of COLLEGE AND UNIVERSITY BUSINESS. During recent years, he has served as editorial director for all three of the company's magazines.

Mr. Sloan is well known as a convention speaker and lecturer and is on the faculty of the program in hospital administration at Columbia University. He is the author of two books, "Hospital Color and Decoration" and "This Hospital Business of Ours," a book for hospital trustees published last year. He is himself a trustee of the Memorial Center for Cancer and Allied Diseases in New York City, holds the honorary degree of doctor of humane letters from Colby College, where he is a member of the board of trustees, and is an honorary fellow of the American College of Hospital Administrators.

Mr. Sloan makes his headquarters in the company's eastern offices at 101 Park Avenue, New York City.

Peter Ball, son of the founder and eastern advertising manager for The Modern Hospital Publishing Company, has been named to the board of directors.

Million Korean Veterans Must Enroll in Year

WASHINGTON, D.C.—The deadline for starting training under the Korean G.I. bill is only one year away for nearly 1,000,000 Korean veterans, the Veterans Administration announced August 20.

The veterans are those who have served since the Korean war began, who were discharged or separated before Aug. 20, 1952, and who have not yet taken advantage of the G.I. training benefit.

Under the law, they actually must "enroll in and begin" G.I. training by Aug. 20, 1954, in order to continue afterward. The mere filing of an application beforehand, with an intention of starting sometime after that date, is not enough, V.A. said.

The 1954 cut-off date applies only to post-Korean veterans who left service before Aug. 20, 1952. Those separated after that date need not concern themselves with the 1954 deadline. Instead, they have two years from the time they left the armed forces in which to get started.

Generally, a veteran is expected to be in the classroom or at the training bench when his G.I. bill cut-off date comes around, if he wants to continue beyond that time.

Lee M. Thurston Dies

WASHINGTON, D.C.—After only two months in office as U.S. Commissioner of Education, Lee M. Thurston, 58, died here September 4 after a brief illness. He was appointed to the federal post after having served as superintendent of public instruction for Michigan from 1948 to 1953.

Here's What 83d Congress Did for Higher Education

WASHINGTON, D.C.—Bills introduced in the 83d Congress that are of significance to higher education are reviewed by the American Council on Education in the August 17 issue of *Higher Education and National Affairs*.

The summary deals only with those bills on which some action was taken during the past session of Congress or on which action is anticipated early in the next session so the issues can be stated prior to such action.

A new study of foundations and similar organizations was approved by H.R. 217, which stated that a special House committee would be authorized and directed to conduct a complete investigation and study of educational and philanthropic foundations and other comparable organizations that are exempt from federal income taxation to determine if any is using its resources for unauthorized purposes. Efforts will be made by this committee to determine whether such foundations or organizations are using their resources for un-American and subversive activities, for political or propaganda purposes or in an attempt to influence legislation. This special committee was ordered to report to the House on or before Jan. 3, 1955.

Though no action was taken on U.M.T. during the first session of the 83d Congress, the President has filled the three vacancies in the National Security Training Commission and has requested a report by December 1. The President also has requested the Office of Defense Mobilization to have a report by the same date on "the availability of manpower to operate simultaneously a military training program and supply our active duty military personnel."

(*Continued on Page* 54)

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SMITH
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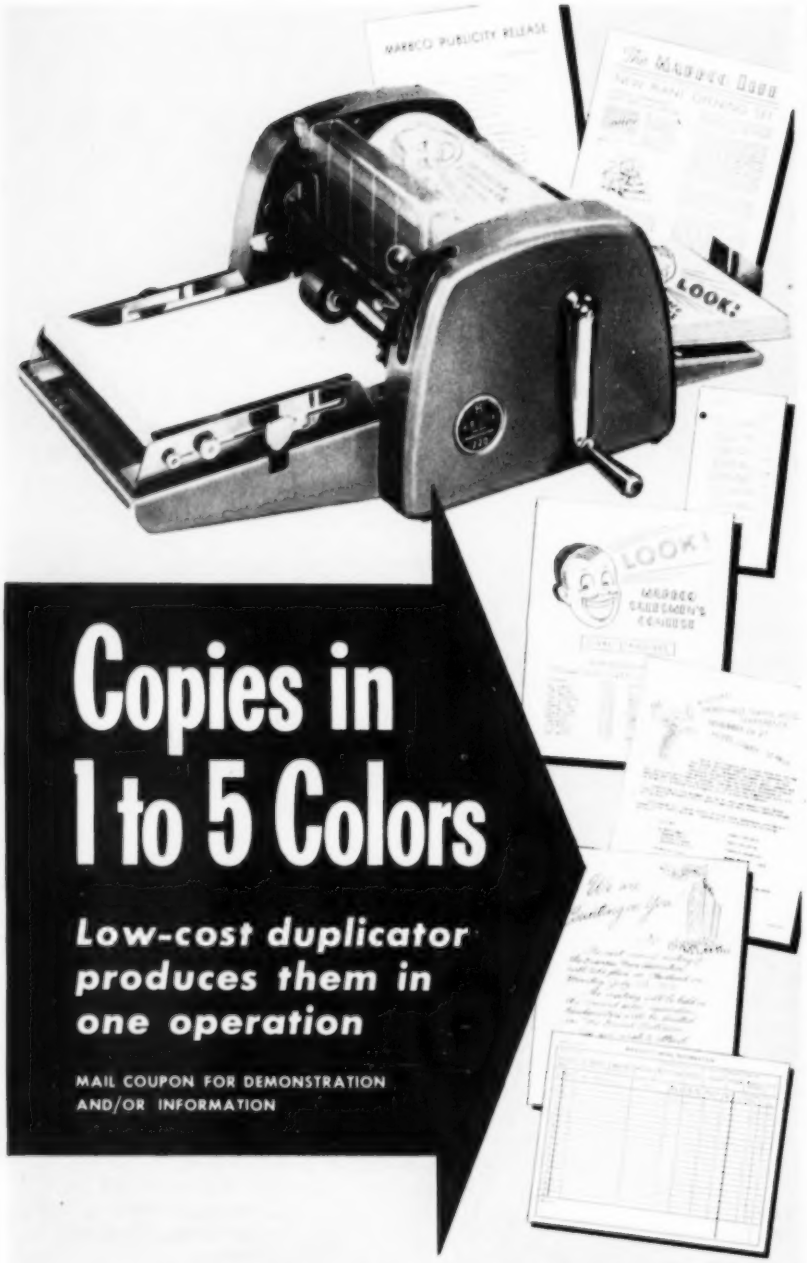

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NEWS. . . . . .

According to the American Council on Education, no tax measures were enacted affecting institutions of higher education. However, public hearings held by the ways and means committee of the House may lead to a substantial overhauling of the Internal Revenue Code in the next session of Congress.

The Hill amendment on the oil royalties in education bill was passed by the Senate but was not reported in the bill of the joint conference committee and consequently was not enacted.

In other action taken by Congress the appropriation to the Veterans Administration reduced the monthly payments to institutions in which P.L. 559 veterans are enrolled from $1.50 to $1 per month per veteran. Congress, however, authorized a study of administration costs prior to the next appropriation for the fiscal year beginning July 1, 1954.

No action was taken on H.R. 6376 and S. 2406, which deal with educational allotments to veterans. Educational organizations are working with the U.S. Office of Education to assemble factual data and judgments and to study the issues involved.

The final appropriation for the Office of Education for the fiscal year ending June 30, 1954, restored all but $146,000 of the reductions made by the House. This legislation included "the grant to land-grant colleges and universities for resident teaching, funds to cooperate with the V.A. in the administration of P.L. 550, and support for most of the continuing services of the Office of Education."

Congress took no action on the bill to increase postal rates in the first session of Congress. The House post office committee has entered into an agreement with the National Education Association to study the effect of the proposed increases upon educational institutions and organizations. The committee on relationships of the American Council on Education at its July 10 meeting requested the staff to study the proposed changes further and to take action that will protect the interests of education as a whole.

On July 31 Congressman Ford introduced H.R. 6709, which would provide for more uniformity of policy within the air, army and navy R.O.T.C. More details will be available on this

Here's what A-V experts say about Pageant pre-lubrication

"Schools, churches, and other groups which use movie projectors are interested in one thing—a machine that is always ready to go. We have found that improper oiling causes most of the trouble that spoils showings. The Pageant's permanent pre-lubrication totally eliminates the problem!"

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"Our service records prove that faulty lubrication *is* the No. 1 'gremlin' in projector breakdowns. Permanent lubrication keeps Pageants operating for longer periods between servicing and relieves people responsible for them of one more important detail."

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"It's the BIGGEST NEWS IN YEARS—no more oiling of projectors! Lack of lubrication really means trouble and big repair bills for the user . . . overlubrication means unnecessary service and cleaning."

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"Schoolteachers and administrators in my area agree on one thing: They want a projector that requires as little maintenance as possible. The permanently pre-lubricated Kodascope Pageant Projector has certainly proved to be the ideal answer, and we are happy to recommend it!"

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There's a "plus" in the Pageant that will save you money!

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The projector shown in an art-instruction class, above, is the standard Kodascope Pageant Sound Projector—the economical first-choice machine for all-around sound-and-silent projection in classrooms and assembly halls. Permanent pre-lubrication is just one of the important benefits this fine projector affords. You'll find that it screens films with exceptional sharpness and brilliance . . . that it reproduces sound with amazing high fidelity . . . and that its light weight and simplified design make it truly outstanding in ease of operation.

The standard Pageant lists at $400 with 8-inch speaker in a single easy-to-handle case. For full information about the Pageant . . . or any of the other projectors in the Kodak line . . . call your Kodak Audio-Visual Dealer or mail the coupon below.

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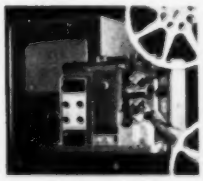

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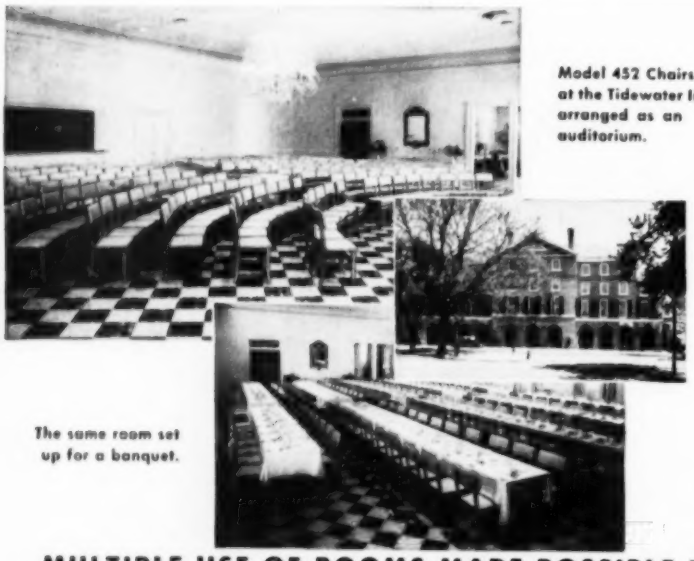
legislation at a later date, according to American Council on Education officials.

On the day before adjournment, H.R. 6812 was introduced at the request of the Administration; this bill would, among other things, extend coverage under the old-age and survivors insurance program to employes now covered by a state or local retirement system. According to the American Council on Education, it will now serve as the basis for new social security legislation when Congress reconvenes.

According to the social security tax timetable, the tax on both workers and employes was scheduled to rise to 2 per cent from the present 1½ per cent. Since the tax is figured only on the first $3600 of each employe's wage or salary, the maximum amount to be withheld from any worker's check will rise from $54 to $72. Employers also will have to contribute $72 for any employe earning $3600 or more. No action was taken in the first session of Congress for changing the date for the increase in social security tax, so it is expected the new tax will go into effect on January 1.



Model 452 Chairs at the Tidewater Inn arranged as an auditorium.

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Releases $50 Million for College Housing Loans

WASHINGTON, D.C.—Congress recently approved release of $50,000,000 in new loan funds for the College Housing Loan Program for use during the fiscal year 1954. There remains $13,500,000 from last year for the current fiscal year 1954, making available a total of $63,500,000.

New regulations have omitted the requirement of a defense relationship on loans. A new rate of interest, 3.5 per cent, has been initiated, effective on all loans through December 31 of this year. College and university administrators interested in the possibility of financing a housing project through the College Housing Loan Program are asked to write to the appropriate regional representative of the Housing and Home Finance Agency for information and application forms.

Cites Gifts as Evidence of Public Interest

CLAREMONT, CALIF.—Gifts of $4,417,000 to Pomona College in the last nine years reflect the public's growing interest in the independent college, according to Allen F. Hawley, director of alumni and fund raising for the college since 1944.

A former Los Angeles newspaperman who has been with Pomona since 1938, Mr. Hawley took charge of the development program in 1944. Gifts for the two preceding years had been $45,500 and $65,600. In his first year as head of the fund raising effort, the total shot up to $234,800. Since then, gifts to Pomona have averaged more than $490,000 annually.

In sheer numbers of contributors to the college, the alumni group constitutes the most important segment, Mr. Hawley said. Last year 3205 alumni contributed $83,887 to the Alumni Fund, an all-time record both in the amount given and the number of givers. Gifts to Pomona for the fiscal year ended June 30 totaled $716,659, including the Alumni Fund.

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NEWS

Fourteen Colleges Refuse to Sign A.F.I. Contract

WASHINGTON, D.C. — The American Council on Education reported on August 21 that 14 colleges and universities had refused to sign a contract with the United States Armed Forces Institute because they feared it gave the federal government dismissal power over teachers.

The A.F.I., a Defense Department unit, prepares correspondence courses for men and women in the armed services. Forty-six universities help grade the assignments and prepare the correspondence courses.

According to the spokesman for the American Council on Education, the 14 institutions objecting to the contract did so because of a phrase in the contract which states: "The contractor will not employ or retain for the performance of services under this contract such persons as are disapproved by the government."

The Defense Department declared that disapproval of a teacher or other university employe would be ordered under the contract after the department had gone through the "normal procedures" used to determine the loyalty of government employes. The clause was inserted in contracts this year to carry out a provision of the new defense appropriations law. This provision states that no money shall be used for payment of any person who advocates, or is a member of an organization advocating, overthrow of the government by force or violence. The American Council on Education stated that the universities did not object to the law but did object to "the extremely broad way the contract interprets it."

It was intimated that a large number of additional institutions would reject the contracts if this wording or phrasing was not changed to conform with the wording of the act itself. However, according to Defense Department officials, the department has "no intention" of changing any of the controversial clause that "expresses congressional intent."

The universities rejecting the contract, according to a statement by the Defense Department, are the following: University of California, University of Georgia, University of Illinois, University of Kansas, Louisiana State University, University of Michigan, University of Minnesota, University of Nebraska, University of New Mexico, University of North Carolina, Oregon State System of Education, Western Kentucky State College, University of Wisconsin, and the University of Wyoming.

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Firm Gives Building to Pitt for TV Usage

PITTSBURGH. — Metropolitan Pittsburgh's educational television station, WQED, will have space in which to begin operations this winter as a result of a gift of a building by the Pittsburgh Plate Glass Company to the University of Pittsburgh. Announcement of the gift was recently made by Chancellor R. H. Fitzgerald.

The building was given to the university without restrictions, but a letter from H. B. Higgins, president of Pittsburgh Plate Glass, indicated the hope "that the metropolitan Pittsburgh educational television station will be

This is Goodform Institutional Chair No. 4310

BEING A LEADER in the food field, Kraft Foods Company, of Chicago, naturally provides good food in its Employees' Cafeteria. The super-comfortable Goodform aluminum chairs insure eating comfort, and add to employee's morale.

While Goodform's good looks and comfort appeal to workers, its long life and dollar-saving value appeal to management. Slightly higher in first cost, Goodform chairs are actually the lowest in over-all cost to be had at *any* price.

Solidly-welded, aluminum construction makes Goodform practically breakproof and fireproof. Smooth surfaces cause no snagging of nylons. And its durable plastic upholstery cleans instantly with soap and water, without scrubbing.

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covered from wall to wall with GrateLite, the diffusing plastic louver . . . an architectural dream.

Diffusion through 3/8" translucent cubical facets produces finer quality illumination . . . fills the room with soft light for "VELVETIZED SEEING". It keeps your eyes "at rest" and makes your work easier.

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Start a new era of eye comfort—with up to 200 foot-candles! Write today on your letterhead for folder 905-N and GrateLite layout guide.

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NEWS. . . . . .

permitted to use the premises so long as in the judgment of the university authorities it is not inconsistent with more important uses." Chancellor Fitzgerald said the hope expressed in Mr. Higgins' letter will be carried out.

The three-story granite building, long a Pittsburgh landmark, contains more than 23,500 square feet of floor area. The very nature of its interior construction will provide adequate space for studio and technical operations of the station, as well as for educational training activities for the university.

Health Insurance for Wilmington Students

WILMINGTON, OHIO.—Health insurance will be provided for Wilmington College students, beginning this September. At the beginning of the fall semester students of the 81 year old Quaker college will have health insurance coverage for $7 per semester or $14 a year.

Services covered by the policy are doctors' visits; $100 surgical maximum, hospitalization for accidents and serious illnesses on or off campus; $100 for replacement of teeth broken or knocked out; emergency outpatient plan for x-ray examinations, and daily care from the college clinic where a full-time nurse is on duty.

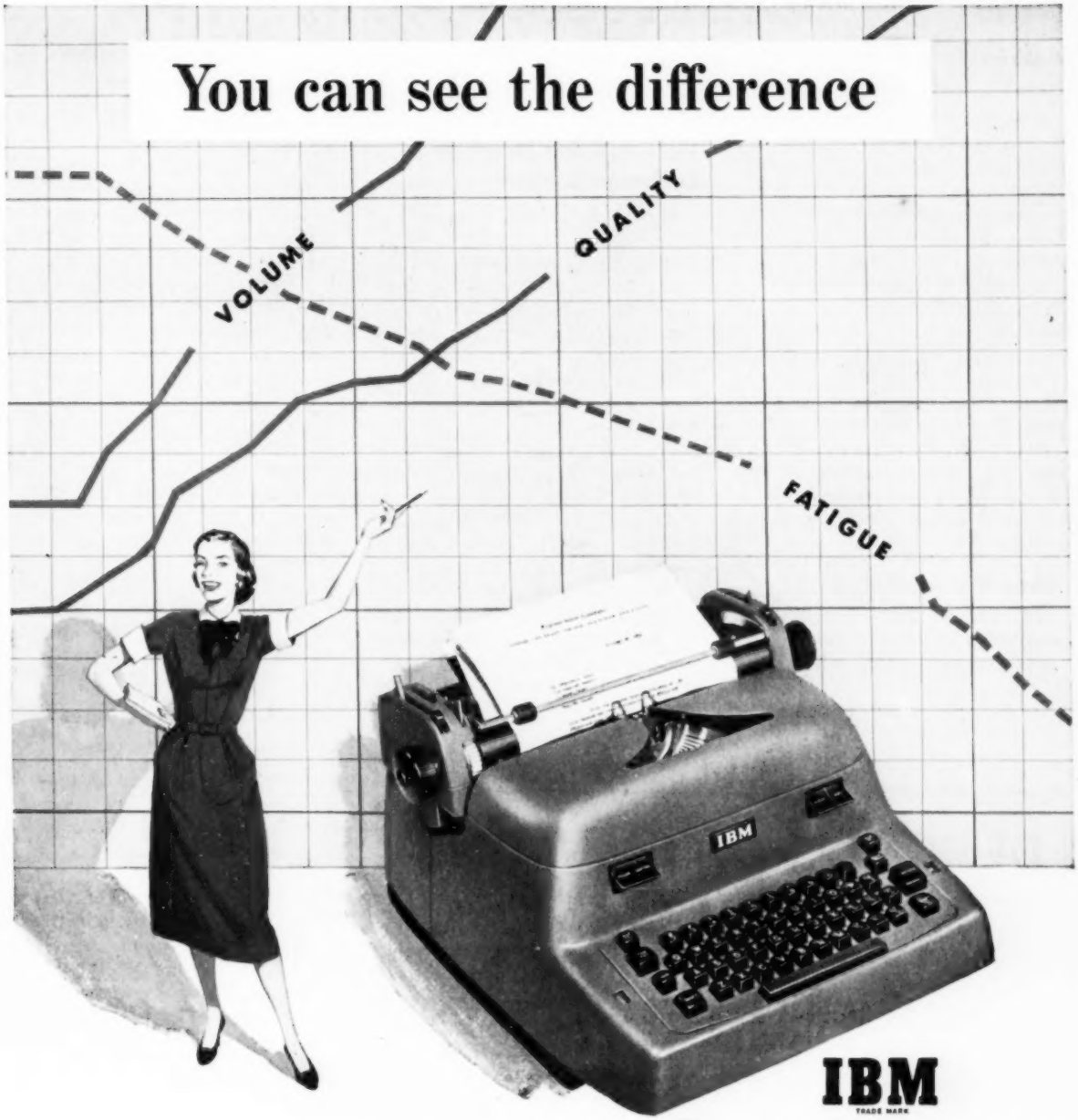
The fee, approved by the board of trustees, is compulsory for all resident students and for nonresident students carrying 12 or more semester-hours. The first $5 will go for the health insurance program; the other $2 for the clinic.

Half of Colleges Unable to Balance Budgets

NEW YORK.—According to a recent survey of 810 American colleges and universities conducted by the *New York Times*, nearly half of all the independent institutions of higher education in the United States are unable to balance their budgets.

According to the *Times'* study, the cost of going to college, including room and board, has increased by 70 per cent in the last 10 years. To meet current deficits, colleges are now engaged in extensive fund raising campaigns seeking an aggregate of $1,150,000,000.

You can see the difference



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NEWS

Architects Honor Illinois Institute

CHICAGO.—The Illinois Institute of Technology campus and its buildings have been chosen one of five 1953 Honor Award winners in the annual competition sponsored by the Chicago Chapter of the American Institute of Architects.

Designed by Ludwig Mies van der Rohe, A.I.A., Chicago architect, the institute project was selected for its simplicity of design and compatibility of design to function. Associates were Holabird & Root & Burgee and Friedman, Alschuler, and Sincere.

Located on the south side of Chicago, the completed buildings are part of a long-range campus plan that is not scheduled for completion for at least another 10 years.

Many Gifts to Lehigh

BETHLEHEM, PA.—The development office of Lehigh University recently announced a total of $667,519.29 had been received in gifts and bequests by the university in the last fiscal year. This marks the most successful annual giving record in its history.

Vote to Build New Lutheran College

FORT WAYNE, IND.—As a result of action taken by the Lutheran Church-Missouri Synod in Houston, Tex., recently, steps have been taken to establish a senior college at Fort Wayne, Ind. Last minute efforts at the convention to prevent the synod from selling its century-old Concordia Junior College campus at Fort Wayne for $1,000,000 failed.

The action approved acceptance of a $1,000,000 offer from the Indiana Technical College at Fort Wayne for purchase of 80 per cent of the Concordia campus. This money, plus an additional $3,200,000, will be used to build the new college at another site to be purchased in Fort Wayne. The new college will offer junior and senior year training for students who later will enter the synod's theological seminary at St. Louis.

Michigan State to Start TV Broadcasts Soon

EAST LANSING, MICH.—WKAR-TV, the television station of Michigan State College, is to begin transmission of scheduled programs early in 1954, college officials have announced.

The station will operate on ultra-high frequency channel 60 with an approximate fringe-area reception of 65 miles, according to W. H. Tomlinson, director of research and promotion of M.S.C.'s television development program. About three months will be required for erection of the 1000 foot transmitter tower, on top of which will be placed a 34 foot television antenna.

Following construction of the transmitter facilities and installation of equipment, the station's test pattern is scheduled to go on the air in November or December. WKAR-TV's "visual power" will be 243 kilowatts and its "oral power," 122 kilowatts, Mr. Tomlinson said.

Ohio Enlarges Privileges of Municipal Colleges

TOLEDO, OHIO.—Two changes in the general code of Ohio, introduced at the request of the University of Toledo, became law in July by action of the state legislature. The first permits members of the board of directors of a municipal university to be chosen from the electors within the county rather than from the city alone.

The second broadens the base of financial support for a municipal university by making it possible for the county to share in that support. This measure is permissive, allowing the voters of the county outside the city boundaries to vote upon a tax levy for the university and, in return, receive the benefits of resident fees.

The new legislation affects all three of Ohio's municipal universities: Toledo, Cincinnati and Akron. Toledo and Akron university officials plan to make use of the new statutes as soon as possible, it is said.

Bequest for Scholarships

BEAVER DAM, WIS.—A gift of $62,169.94 from the estate of Mrs. Myrtie Hyland Winnett of Los Angeles will permit establishment of a scholarship fund for students either

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attending Wayland Academy or for Wayland Academy graduates to continue their education elsewhere. The fund will give preference to Wisconsin girls, particularly those entering the academy from rural areas.

Stanford to Move Its Medical School

PALO ALTO, CALIF.—The board of trustees of Stanford University recently announced plans to consolidate Stanford's medical school activities on the campus at Palo Alto in a move from San Francisco that will probably take from three to five years.

New buildings are to be erected in an area near the anatomy and bacteriology laboratories, next to the museum. The clinical school will vacate its medical school at Clay and Webster Streets in San Francisco.

The decision to move the medical school came after a year-long study that involved a thorough look at Stanford University's situation and also at the medical education problem nationally. In a report to the trustees on the study group's findings, President Sterling said the recommendation to move the school was based on the conviction that the future of medical education is dependent upon the course of medical science, which in turn has become increasingly dependent upon the basic physical and social sciences. "This key relationship of medical education and science to other scientific fields can best be strengthened and advanced by bringing the School of Medicine into the closest possible physical and intellectual relationship to the whole university," the president declared.

Jenner Committee Issues Report on Teachers

WASHINGTON, D.C.—According to a recent announcement, the Senate committee on the judiciary has issued a report of the subcommittee to investigate the administration of the internal security act and other internal security laws (Jenner committee) under the title, "Subversive Influence in the Educational Process." Included in the report of the committee is a table listing 92 present or former teachers who refused to testify, claiming the protection of the Fifth Amendment.

The report recommends to educational authorities that they "give consideration to the establishment of criteria and the initiation of procedures whereby schools, colleges and universities can eliminate teachers who have demonstrated their unsuitability to teach, because of their collaboration with the Communist conspiracy."

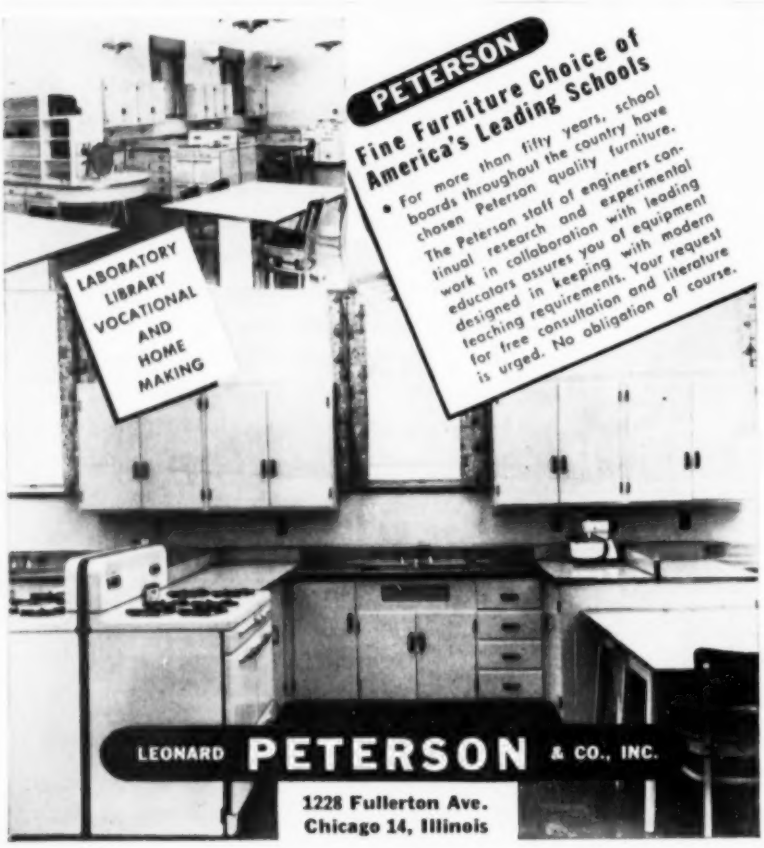
New College Aid Group Begins Operations Soon

NEW YORK.—According to an announcement by Irving S. Olds, retired chairman of the United States Steel Corporation, the newly formed Council for Financial Aid to Education will begin its operations September 15 to interest business and the general public in the financial plight of privately supported universities and colleges. The organization was formed by leading business executives who expedite assistance to higher education throughout the nation. Mr. Olds stated that the organization would not solicit or distribute funds, but would act in an "advisory intermediary capacity" as a center of information for those seeking aid or intent on giving it.

The council will work in close cooperation with the 31 state and regional groups raising funds for colleges and universities in their areas. It is such groups as these that the council will refer corporations, foundations or other prospective donors that do not select a particular institution. The council also will work in close cooperation with the United States Chamber of Commerce, the National Association of Manufacturers, the American Council on Education, and other organizations interested in higher education.

Officials of the new council pointed out that business was permitted to give 5 per cent of income to education and philanthropy, but at present its contribution was not even 1 per cent.

Dr. Wilson M. Compton, former president of the State College of Washington and former head of the International Information Administration, is president of the council. The board of directors, which eventually will number 24, including eight educational leaders, now consists of: Alfred P. Sloan Jr., chairman of the General Motors Corporation; Frank W.



WISCONSIN *chooses Simmons Metal Furniture*

Large illustration: Dormitory Room No. 158 with its compactly designed Duet Desk F-142-21. Each student has own drawer and book shelves. Other pieces are: Chest F-142-24, with Mirror FM-42; Chairs F-711, Arm Chair F-762; Night Table F-142-14. Below: Single Desk F-142-11.

A salute to the Wisconsin Board of Regents of State Colleges

...for an aggressive, long-range building program. Six student dormitories, each with 43 double rooms accommodating 84 students, have already been completed at Platteville, Stevens Point, River Falls, La Crosse, Superior and Oshkosh.

Following a percedent established when Simmons metal furniture was selected to furnish the University of Wisconsin dormitories — as well as state hospitals and other institutions — these six dormitories also are Simmons equipped.

A wide range of color schemes, with Dove Green and Grey predominating, provides colorful and stimulating room settings.

Significantly, the economy of Simmons steel furniture is again emphasized in low upkeep cost assured by long-lasting, mar-resisting, fire-safe *Simfast* finishes. And, of course, good looks!

Illustrated above: Single Desk F-142-11.

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Johns-Manville, the pioneer in sound control, recommends Fibretone Acoustical Panels as an efficient way to reduce disturbing noise at low cost.

Fibretone Panels are easily installed over new or existing construction.

BECAUSE DISTRACTING NOISE can lead to confusion and careless mistakes in schoolwork, practically all new schools include acoustical ceilings for noise absorption. However, even if your school was constructed before sound control became an established science, you can have Johns-Manville Fibretone Acoustical Panels easily and quickly installed over your present ceilings with little interruption to regular routine.

Johns-Manville FIBRETONE offers an acoustical ceiling which is highly efficient yet modest in cost. It consists of 12" square panels of sound-absorbing materials in which hundreds of small holes have been drilled. These holes act as "noise-traps" where sound energy is dissipated. Fibretone is predecorated, can be painted and repainted, and is available with a flame-resistant finish.

Other J-M Acoustical Ceilings include *Permacoustic**, a textured noncombustible tile with great architectural appeal; *Transite**, panels made of fireproof asbestos; and *Sanacoustic**, perforated metal panels backed with a noncombustible, sound-absorbing element.

For a complete survey by a J-M acoustical expert, or for a free book entitled "Sound Control," write Johns-Manville, Box 158, Dept. CU, New York 16, N. Y. In Canada, write 199 Bay Street, Toronto 1, Ontario.

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40 years of leadership in the manufacture of acoustical materials.

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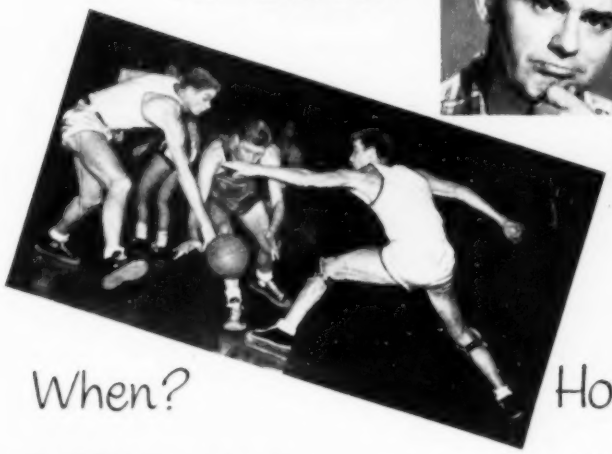

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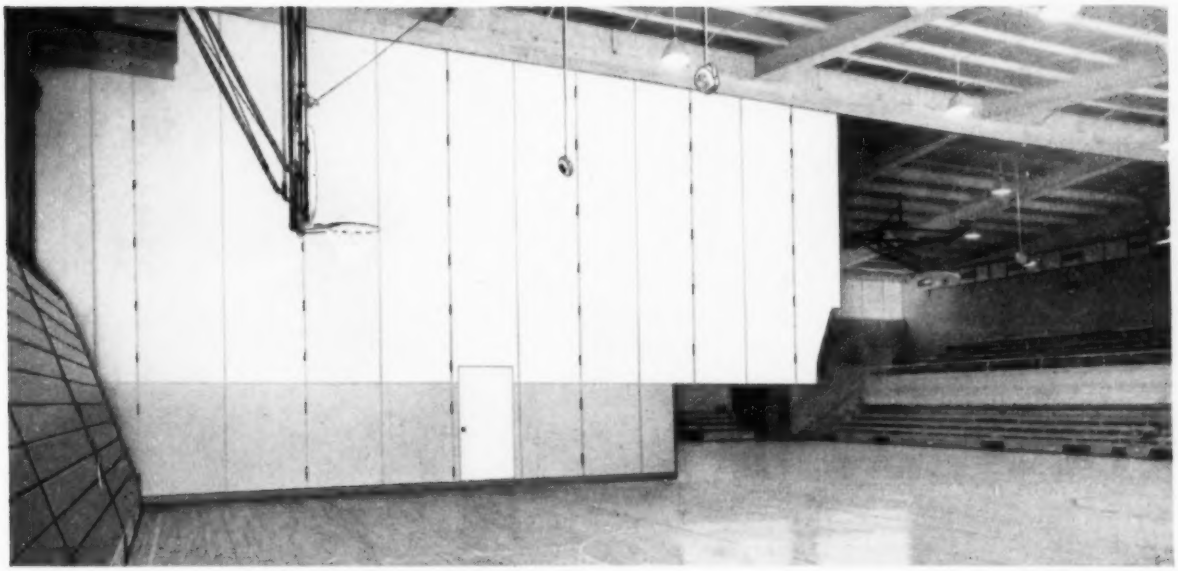
SOLVE your schedule **BLUES!**



Use **HORN** equipment!

The Ellinwood, Kansas, High School gets maximum gym use with Horn equipment! An electrically operated partition is easily extended to provide two practice gyms—here boys use one, girls another. For full floor space, Horn Folding Gym Seats fold to a *smooth, safe* sloping surface. Horn Folding Seats in balcony fold back providing more clear space for teaching purposes.

And Horn equipment provides adequate space for exhibition games. Partitions fold back, seats extend easily. Automatic locking and direct floor support for each seat and foot board assures safety. All Horn equipment gives you years of trouble-free service.

Your local Horn representative helps you plan for efficient gym use. Horn factory crews supervise installation. Write today for details on Horn folding gym seats and folding partitions . . . and the new Horn folding stages!

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This Coronet group is an example of our newest commercially-priced dormitory suites, created especially to combine compact utility with striking design. All wood pieces are handsomely finished in smooth softone oak, with tops of all case pieces in matching Formica or hardwood.

Whether for dormitories, reception rooms, lounges or offices, you can depend on Field's to provide the proper furniture and fittings for utmost attractiveness and comfort. At your request our experienced decorating studio will assist in any or every selection of commercially-priced furniture, floor coverings and accessories, including mattresses, linens, china, silver and glassware.

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NEWS. . . . . .

Abrams, chairman of the Standard Oil Company (New Jersey); Henning W. Prentis Jr., chairman, Armstrong Cork Company; Walter P. Paepcke, chairman, Container Corporation of America; Dr. Frank H. Sparks, president, Wabash College in Indiana, and Irving S. Olds, retired chairman of the U.S. Steel Corporation.

Columbia Acquires More Rockefeller Center Land

NEW YORK.—Columbia University has purchased for $5,500,000 a strip of land 100 feet wide in Rockefeller Center on the east side of the Avenue of the Americas, between 48th and 51st streets, containing 60,000 square feet. Columbia thus became the owner of virtually all the land on which the center is located.

The university's new property, from which it will receive an annual rental from Rockefeller Center of $200,000, includes the western part of the R.C.A. Building and parts of the 31 story Americas Building and the 20 story United States Rubber Company Building. This will increase to $3,800,000 the annual rental that Columbia University receives from Rockefeller Center.

At the same time, Rockefeller Center announced that the existing lease on the $125,000,000 development had been extended by the university from Sept. 30, 1962, to Sept. 30, 1973. Renewal options permit Rockefeller Center to extend the lease 96 years to 2069. The original lease between the university and the center, which was made in 1928 by John D. Rockefeller Jr., was for 24 years, with options for renewals to 2015.

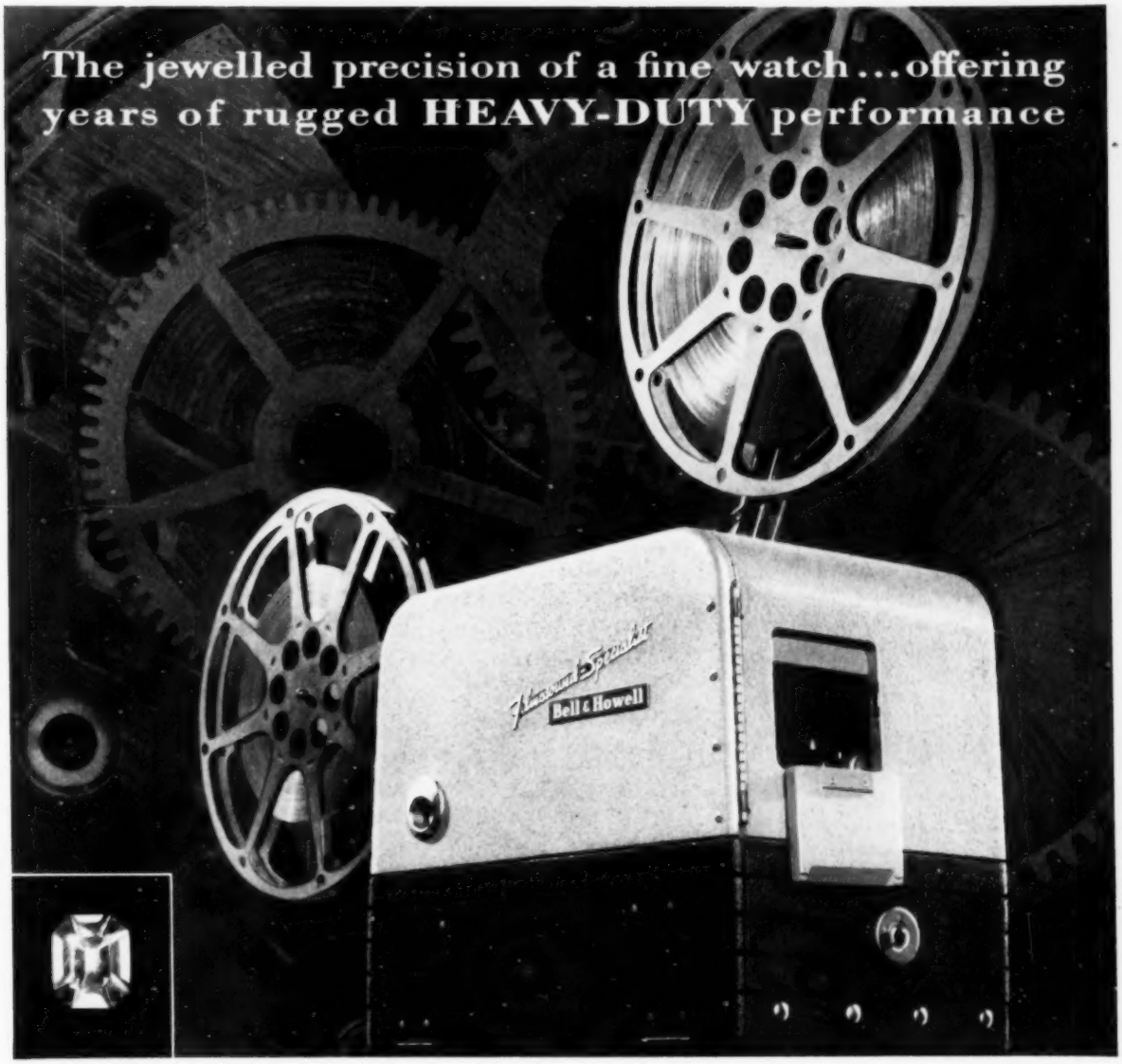
Mr. Rockefeller stated that Rockefeller Center has paid Columbia University $72,000,000 rental since 1928 for the use of the land and has paid more than $60,000,000 to the city in real estate taxes since the first of the buildings was opened in 1932.

Rockefeller Center buildings are occupied by more than a thousand tenant firms. Controlling stock in the center is owned by the five Rockefeller brothers.

Alumni Giving Increases

HANOVER, N.H.—Officials of the Dartmouth College Alumni Fund announced recently that the Fund has broken all previous records in the

new — FILMOSOUND SPECIALIST!



Sapphire jewels give critical parts 400% longer life! The new Filmosound Specialists are engineered to give long trouble-free performance. Sapphire jewels permanently bonded to metal protect the critical film-handling parts. Bell & Howell designed these jewelled parts originally to meet the rigid requirements of the armed forces. To meet your 16mm projection needs, your choice of many other exclusive features may be added to the basic unit, whether standard model or magnetic recording model. Only Bell & Howell Special Representatives are authorized to sell these Filmosound Specialists.

Bell & Howell *makers of the world's finest motion picture equipment*

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number of donors, amount contributed, and participation by alumni. A total of $671,147.15 was contributed by 17,375 alumni, representing an increase of $59,616 and 1229 donors over last year's record breaking totals.

3½ per Cent Interest Rate on Housing Loans

WASHINGTON, D.C.—The administrator of the Federal Housing and Home Finance Agency, with the approval of the Bureau of the Budget, has removed the "defense related restriction," thus permitting the consideration of many student and faculty housing projects formerly unacceptable.

By action of authority conferred by P.L. 94 of the 83d Congress, which repealed the former provision establishing a formula for fixing a maximum interest rate, the housing administrator established 3½ per cent as the rate for loans on new projects for the current fiscal year ending June 30, 1954. As the result of approval currently given to the housing program, the F.H.H.F.A. will be permitted to loan approximately $63,000,000 on new projects for college housing.

According to a recent announcement, the American Council on Education will continue its efforts to keep the college housing loan program operating on a basis that makes it useful to educational institutions. Council officials were of the opinion that there are strong forces, both in Congress and in the Administration, desiring liquidation of this and other federal loan programs to assist in providing housing.

GIFTS AND BEQUESTS

• **Mount Holyoke College** officials reported receiving donations and bequests for the current fiscal year amounting to $355,400. More than half this total was given by the alumni.

• **New York University** alumni officials reported that a record total of $241,982 was contributed by N.Y.U. graduates in the 1952-53 alumni fund appeal. The sum represented almost 75 per cent more than last year's total of $138,095.

• **Yale University** alumni fund officials reported the completion of the 1952-53 campaign with a record breaking total of $1,021,832. This exceeded last year's record by $6,414.

• Officials of **Allegheny College,** Meadville, Pa., have announced receipt of $30,580 from 1504 alumni contributors for an average gift of $20.33 for the year ending June 30, 1953. This record, which tops the best previous year, was considered to be specially significant because a year ago the college had completed a capital gifts campaign of $1,375,000.

• The Maytag Company Foundation, Inc., of Newton, Iowa, announced a scholarship award and college grants program with a total value in excess of $45,000. In addition to scholarship grants, the Maytag Foundation is contributing $5000 to the **Iowa College Foundation,** an association of 18 privately endowed colleges set up to conduct a unified drive for funds to help operate their institutions.

• Eugene Higgins, once known as the wealthiest bachelor in New York City, recently left a net estate of $40,111,999. Terms of the will, announced at the filing, provided for bequest of the residue—now fixed at $37,818,531—to **Yale, Columbia, Harvard** and **Princeton universities** for scientific education and research.

• **St. John's College,** Annapolis, Md., has been granted $37,000 by the Ford Foundation's Fund for the Advancement of Education for the purpose of instituting a college teaching internship program.

• The W. K. Kellogg Foundation recently announced grants of $122,500 to the **University of Oklahoma,** and a grant of $135,000 to the **University of Utah** for the purpose of improving the teaching of preventive medicine in the undergraduate medical curriculum. The gifts will provide for the major part of the financing for an initial five-year period of an enlarged and reorganized program of instruction in both institutions.

• **Cornell University** announced receipt of a three-year grant of $260,000 from the Ford Foundation for its support of studies at the university in connection with India and Indian problems.

NAMES IN THE NEWS

Francis R. Geigle, head of the business education department at Northern Illinois State Teachers College, De Kalb, Ill., has been appointed as administrative assistant to **President Leslie A. Holmes.** Dr. Geigle came to the college from a position as assistant vice president of the First National

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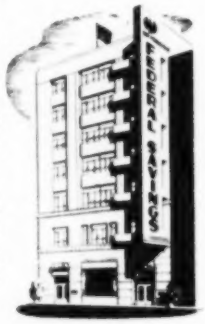
Conservative institutions and estate trustees know the importance of diversification. They properly seek, too, the highest earnings consistent with safety.

SAN FRANCISCO FEDERAL regularly pays a higher dividend, currently **3%** compounded semi-annually, and each separate account is insured to $10,000.

Diversify by investing a portion of your funds here—"where thousands save millions"—and, through sound management, safely earn more.



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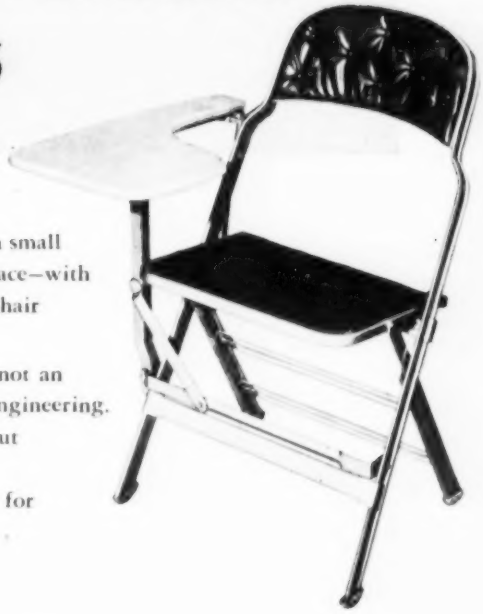

You'll be amazed at how many people you can put in even a small room—comfortably seated and with comfortable writing space—with this new Clarin chair. Undoubtedly you've wished for a chair like it many times.

The Folding Tablet Arm is a built-in part of the chair, not an attachment. It is strong, easy to operate, a marvel of skillful engineering. A finger-tip touch lifts the arm so you can get into and out of the chair with ease. The arm folds down at the side, out of the way, when not needed, so the chair can be used for ordinary seating. The entire chair folds flat in seconds, for quick, safe stacking. Folded depth is only 3 inches.

WRITE TODAY! for full information about this unique Clarin Tablet Arm Folding Chair. Let us send or bring you a sample to examine. See for yourself the space-saving marvels it makes possible. See the engineered, built-in quality that distinguishes Clarin Chairs. Make your own comparisons. Available with Clarin's famous steel-framed wood seat, or with fine quality leatherette on seat and back, or on seat alone. Foam rubber cushioning if desired.

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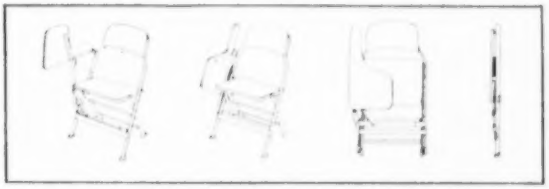

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CARILLONIC BELLS
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MARYLAND CHAPEL

This university installation, gives the listening ear the perfectly balanced and accurately matched tones of the carillon bells of Flanders with a 61-note Flemish-type instrument, played manually.

In addition, a 25-note English-type instrument, equipped with automatic controls, is used to play college tunes at predetermined hours.

In every program planned for their use "Carillonic Bells" lift the hearts of the hearers, adding spiritual tone to the campus. Investigate the musical and public relations value of the carillon for *your* campus. Write—

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NEWS

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Rev. A. L. Seebold

Rev. Andrew L. Seebold, S.M., president of the Cathedral Latin School of Cleveland, has recently been named president of the University of Dayton, Dayton, Ohio. He succeeds the **Rev. George J. Renneker, S.M.** Father Renneker left the University of Dayton to become director of Mount St. John, the normal school of the Cincinnati Province of the Society of Mary, succeeding the **Rev. William Ferree, S.M.,** there.

Ellis F. White, president of Fitchburg State Teacher's College, Fitchburg, Mass., resigned as of September 1 to accept the post of director of the educational division of the American Social Hygiene Association in New York.

Laurence G. Tighe, treasurer and former acting director of athletics at Yale University, will retire October 1. He is retiring on the advice of physicians.

Rev. Richard F. Ryan, S.J., was recently appointed president of Regis University in Denver. He was assistant in the dean's office of St. Louis University, St. Louis, prior to his present appointment.

Rev. Lyle W. Lieder, pastor of the Methodist Church at Hornick, Iowa, has been named vice president of Morningside College, Sioux City, Iowa. Mr. Lieder, in addition to other duties at Morningside, will be director of the building advance program.

Duncan I. McFadden, controller of Stanford University, has been elected a director of the San Francisco Control of the Controllers Institute of America. At the annual meeting of the organization's Pittsburgh Control, **H. R. Patton,** controller of Carnegie Institute of Technology, was named a director. He is past president of the local controllers' group.

Four vice presidents for Wayne University, Detroit, were recently appointed by the Detroit Board of Education as a result of a recent administrative organizational plan recommended by Wayne's president, **Clarence B. Hillberry. Arthur Neef,** law school dean and provost, was made vice president and provost; **Winfred A. Harbison,** associate dean of administration, was named vice president for academic administration; **Olin E. Thomas,** executive secretary, becomes vice president for business and finance, and **William E. Stirton,** who was assistant to the president and director of community relations, is now vice president for development and services. The four will constitute the only staff officers reporting directly to the president.

Philip Price, director of Todd Union at the University of Rochester for the last five years, has been named dean of students at Clarkson College of Technology, Potsdam, N.Y. Dean Price succeeds **William J. Farrisee,** who has resigned to become dean of students at

Philip Price

Benjamin C. Bowker

Stevens Institute of Technology, Hoboken, N.J. **William G. Van Note,** president of Clarkson College of Technology, also announced that **Benjamin C. Bowker** of Toledo, Ohio, has been appointed director of development for Clarkson College. To assume the duties of this newly created post, Mr. Bowker will resign his position as president of Bowker and Company, Inc., a Toledo public relations and fund raising firm.

George Little Follansbee, chairman of the department of biology and master of Phillips Academy at Andover, Mass., is the new headmaster of Shady Side Academy, Pittsburgh. He took office September 1.

Harvey V. Higley, chairman of the board of the Ansul Chemical Company, Marinette, Wis., with which he has been associated since 1919, recently accepted appointment as Administrator of Veterans Affairs. Mr. Higley has been prominent in business, veterans and civic affairs since World War I.

Fern Gleiser, professor of institution economics and management of the school of business, University of Chicago, was named president-elect of the American Dietetic Association at its recent convention. In this capacity she will serve as a member of the executive board, succeeding to the presidency in 1954-55.

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NEWS

Benjamin H. Emery

Benjamin H. Emery, a member of the Chicago Theological Seminary staff, recently has been appointed assistant business manager of the seminary. He will assist **Robert E. Tinker,** business manager of the institution. Mr. Emery resigned from a business position in Chicago to affiliate with the seminary as a staff member last January.

E. R. Park, manager of the men's quadrangle at Purdue University, recently resigned in order to operate a business enterprise in Saratoga, Calif. **J. C. Smalley** has been named assistant director of men's residence halls and manager of the men's quadrangle for the coming year. **Darold Shutt** has also been named assistant director of men's residence halls and manager of the "X" residence.

Herbert O. Farber

Herbert O. Farber, assistant controller of the University of Illinois, became acting controller on September 1. **Lloyd Morey,** controller since 1916, is acting president, following the recent resignation of **George D. Stoddard** as president.

Glenn L. McConagha, civilian director of the United States Armed Forces, will become administrative vice president of Muskingum College, New Concord, Ohio, on October 1.

Miriam Huffman, assistant foods manager at Pomerene Hall Refectory at Ohio State University, Columbus, has been named dietitian at Wilmington College, Wilmington, Ohio. Miss Huffman succeeds **Ruth Kinder,** who resigned in June to return to private restaurant managemnet in Gary, Ind. Miss Huffman's appointment became effective September 1.

Sister Mary Aloysius, B.V.M., has been named to succeed **Sister Mary Anne Leone, B.V.M.,** as president of Clarke College, Dubuque, Iowa. The appointment became effective August 15.

Sister M. Angela Canavan, O.S.F., recently was appointed president of Rosary Hill College, Buffalo, N.Y. She succeeds **Mother M. Alphonse, O.S.F.**

Robert J. Cox, pastor of the Free Methodist Church of Medford, Ore., has been appointed successor to **Llewellyn Davis,** who recently resigned as president of Los Angeles Pacific College.

Carey Croneis, president of Beloit College, Beloit, Wis., has been named provost of Rice Institute, Houston, Tex. His appointment will become effective in January 1954.

George Irving Christie, president-emeritus of Ontario Agricultural College at Guelph, Ont., died recently at the age of 72. He had served for 19 years as president of the agricultural college, largest in the Canadian commonwealth.

George H. Huntington, former vice president of Robert College at Istanbul, Turkey, died recently in Portland, Ore., at the age of 75 years. He had retired in 1937.

Wilbur J. Adams, manager of the Bradley University bookstore at Peoria,

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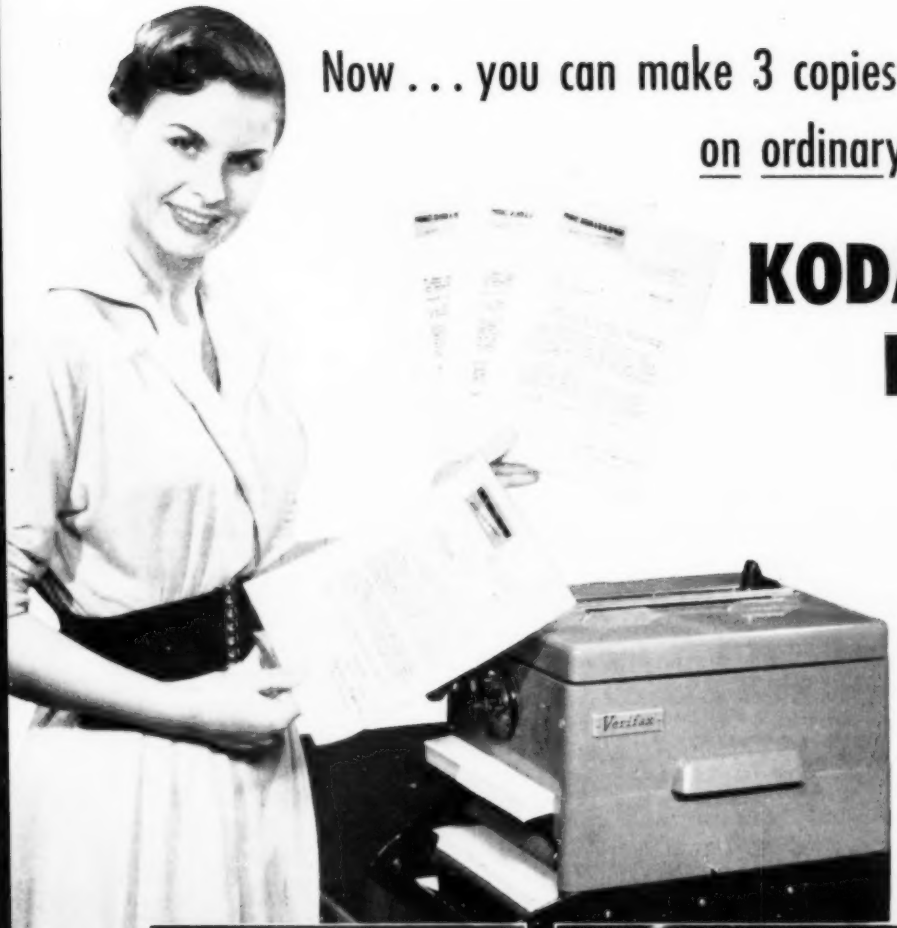

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NEWS. . . . . .

Ill., was killed in a boating accident in August when the boat in which he was traveling capsized and Mr. Adams was hit by the outboard motor.

Thomas Franklin Kane, former president of the University of North Dakota, died recently at the age of 90. He had been president there from 1918 to 1933 and, prior to that, president of the University of Washington.

Peter Kyle McCarter, dean of the University of Mississippi, has resigned to become vice president and professor of English at the University of Oklahoma.

Frank Bailey, treasurer of Union College, Schenectady, N.Y., for the last 51 years, died August 26 at the age of 88 years.

DIRECTORY OF ASSOCIATIONS

National Federation of College and University Business Officer Associations

President: Irwin K. French, Wellesley College; vice president: Gerald D. Henderson, Vanderbilt University; secretary-treasurer: Nelson A. Wahlstrom, University of Washington.

Association of College Unions

President: Louis Day Jr., University of Pennsylvania; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Convention: April 25-28, Edgewater Beach Hotel, Chicago.

National Association of Educational Buyers

President: Forrest Abbott, Barnard College; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Convention: May 5-7, Huntington Hotel, Pasadena, Calif.

Association of College and University Business Officers

American Association

President: J. B. Cephas, Virginia State College; secretary: L. H. Foster Jr., Tuskegee Institute.

Convention: May 2-4, Lincoln University, Jefferson City, Mo.

Central Association

President: Jacob Taylor, Ohio State University; secretary-treasurer: T. N. McClure, Knox College.

Eastern Association

President: F. Morris Cochran, Brown University; secretary-treasurer, Irwin K. French, Wellesley College.

Convention: Nov. 29-Dec. 1, Washington, D.C.

Southern Association

President: J. H. Dewberry, University System of Georgia; secretary-treasurer: Gerald D. Henderson, Vanderbilt University.

Western Association

President: George W. Green, California Institute of Technology: secretary: Duncan McFadden, Stanford University.

American College Public Relations Association

President: Mrs. Veta Lee Smith, Marshall College, Huntington, W.Va.; executive secretary: Marvin W. Topping, 726 Jackson Place, N.W., Washington 6, D.C.

Convention: June 21-24, Hotel Roosevelt, New York City.

Association of Physical Plant Administrators of Universities and Colleges

President: Sam Brewster, Alabama Polytechnic Institute; secretary-treasurer: A. F. Gallistel, University of Wisconsin.

National Association of College Stores

President: R. C. Avery, Cornell Campus Store, Ithaca, N.Y.; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

College and University Personnel Association

President: Max W. Sappenfield, University of Indiana Medical Center, Indianapolis; secretary-treasurer: Clara Stimson, University of Rochester; executive secretary, Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: August 1954, University of California and California Institute of Technology.

National Association of College and University Housing Officers

President: Kenneth D. Lawson, Michigan State College; vice president: M. R. Shaw, Cornell University; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

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College or School Business Executive Age 53; married; member of Lutheran church; thirty years experience in auditing, budgets, purchasing, personnel, finance supervision and management. Write Box CW 167, COLLEGE AND UNIVERSITY BUSINESS.

College Union Director Male; five years experience as student assistant and as director of college union and dormitories; experienced in opening and organizing new project; experienced in university and small college operation. Write Box CW 179, COLLEGE AND UNIVERSITY BUSINESS.

Comptroller Age 33, graduate Harvard College and Harvard Graduate School of Business, at present Comptroller business corporation (two years), certified pulbic accounting experience (five years), personnel work (one year), high level civic and community leadership, is service-motivated and desires to change from present position to career in college administration; excellent references. Write Box CW 181, COLLEGE AND UNIVERSITY BUSINESS.

Controller or Business Manager At present employed; thirteen years experience private school and college accounting and management; twelve years other budget accounting, desires change to eastern liberal arts college; M.A., married, no children. Write Box CW 159, COLLEGE AND UNIVERSITY BUSINESS.

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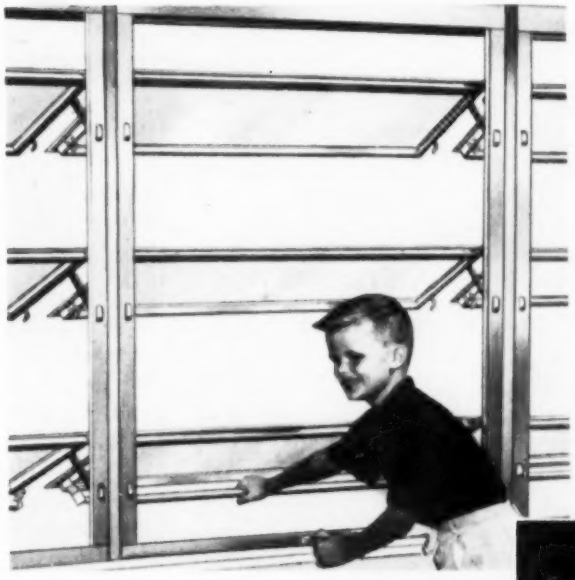

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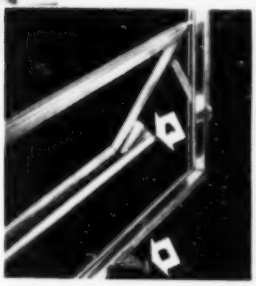

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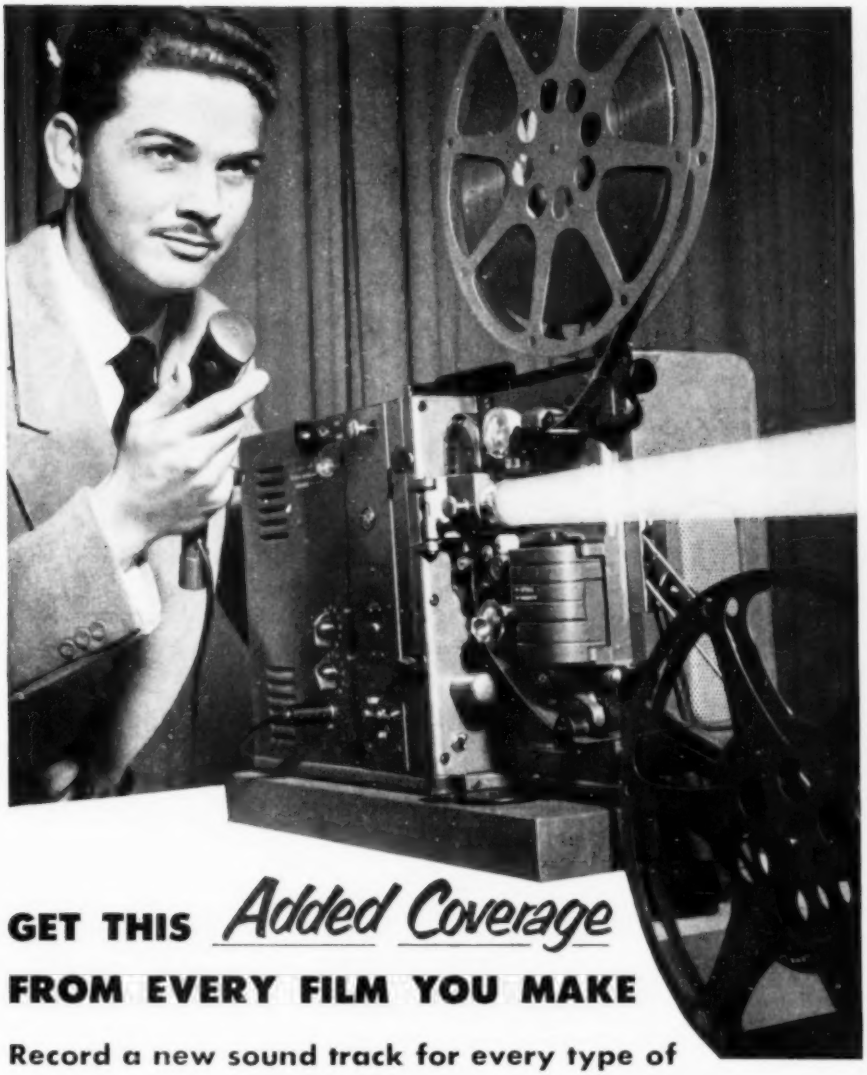

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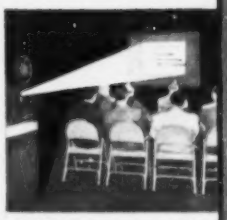

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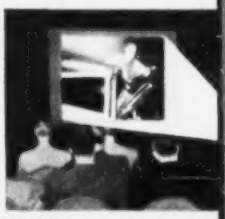

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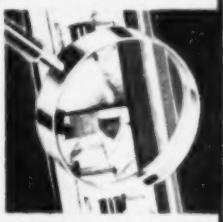

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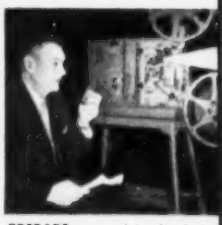

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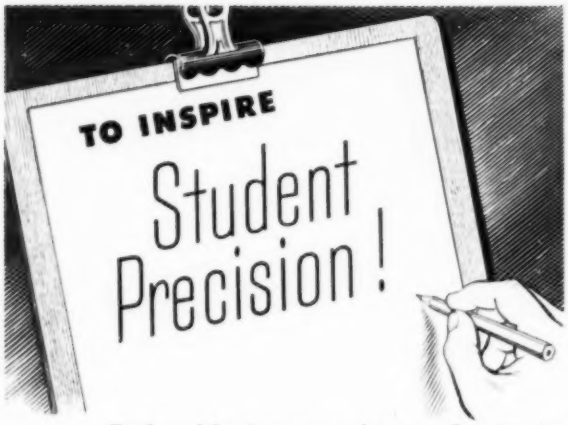

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Ultra sensitive instruments of the double pivoted type requiring no leveling when used in horizontal position. Combine high accuracy and a 6.1 inch scale . . . ideal for precise measurements of potential and current at very low energy levels. Available as d-c voltmeters, millivoltmeters, milliammeters and microammeters; electrolysis volt-millivoltmeters and high resistance voltmeters—also as a-c rectifier type instruments and as thermocouple ammeters, milliammeters and voltmeters.

For Electrical Machinery Labs MODEL 633

A clamp-on volt-ammeter built to Weston standards of safety, accuracy and dependability. Five full scale a-c current ranges of 1000/250/100/25/10 amperes with range overlap. Three self-contained a-c voltage ranges of 700/350/175 volts—insulated for 750 volts. Has convenient 6 position switch easily operated by thumb—adjustable pointer stop facilitates measuring starting current of motors.

WESTON

WESTON *Instruments*

Thrive on hard usage ... breakage low ... chippage practically non-existent

that's why the University of Michigan South Quadrangle Residence Hall standardized on Libbey Heat-Treated Tumblers in feeding its 1200 students

MANY of the country's largest hotels, restaurants, hospitals and schools send the same report: Libbey Heat-Treated Tumblers can take heavy "punishment" —that's because they're specially processed to stand up 3-5 times longer than ordinary tumblers.

For added safety, every Libbey glass has a chip-resistant rim . . . at the spot where most glassware chips first! This feature means added economy through reduced breakage, smaller needed inventory and fewer glassware replacements. And every Libbey glass has the additional money-saving protection of this famous guarantee: "A new glass if the rim of a Libbey 'Safedge' glass ever chips!"

Why not see how Heat-Treated Tumblers can cut your glassware costs and at the same time give you a better glassware service? Your Libbey supply dealer has samples and prices of the full line. See him or write direct to Libbey Glass, Toledo 1, Ohio.

This recently completed University of Michigan South Quadrangle Residence Hall was built at a cost of well over 5½ million dollars. It is recognized as one of the most modern dormitories in the country. 1200 students live here according to the Michigan House Plan which divides the Quadrangle into seven house groups and four dining rooms.

LIBBEY GLASS *Bounce Tumblers*

ESTABLISHED 1818

Libbey HEAT-TREATED

LIBBEY GLASS, Division of Owens-Illinois Glass Company, Toledo 1, Ohio

DURABLE AND Smart FURNITURE

AMERICAN CHAIR COMPANY

Wall-Saving Chair

No. 400

Also available in sectional love seat and davenport.

For dormitory, library and other college uses. See your dealer for information and prices.

AMERICAN
CHAIR COMPANY
MANUFACTURERS
SHEBOYGAN, WISCONSIN

Provide the means for Feminine Discreetness

Women are discreet instinctively. The modern powder room is equipped with the SANIBAG method of quick, modest disposal of sanitary napkins. SANIBAG service is practically a must in motels, schools, hotels, restaurants and public buildings.

SANIBAG service not only pays off in good will, but with dollars saved in maintenance costs. Also a tremendous saving in plumber's bills arising from toilet stoppages. To provide SANIBAG service is simply good business judgment.

When writing for free samples and complete information, please include the name and address of your supply merchant.

Buy from our Beier & Company 409 SOUTH GREEN STREET CHICAGO 7, ILLINOIS

LOOKING FOR SOMEONE?

Someone to fill a vacancy in your staff—a Business Manager—Superintendent of Buildings and Grounds—Purchasing Agent—Director of Food Service and Dormitories?

Or maybe you are thinking about making a change.

If so, consider placing a "Classified Advertisement" in the next issue of College and University Business.

It costs but 10c a word (minimum charge of $2.50) to place your story before the administrative officers of colleges and universities in this country and Canada.

"Classified Advertisements are working successfully for others—they can do the same for you.

WRITE TO: ***Classified Advertisements***

COLLEGE *and* UNIVERSITY BUSINESS

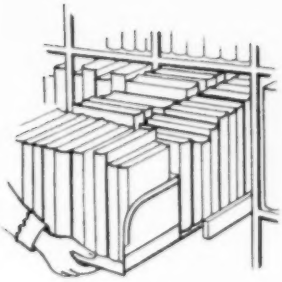
919 N. MICHIGAN • CHICAGO 11, ILLINOIS

REVOLUTIONARY NEW

Hamilton COMPO Stack

DOUBLES LIBRARY CAPACITY

Single-tier height Compo Stack with closed compartment for locked control of valuable collections, at left; closed end panel at rear right.



IT'S TRUE—the Hamilton Compo Stack doubles the normal capacity of the library. How? By replacing conventional shelves with smooth-operating *sliding* shelves of far greater capacity. This completely different concept of book storage eliminates much unnecessary aisle space and brings entirely new efficiencies to library operation.

If you are planning or erecting library projects, be sure to get full information on Hamilton Compo Stacks and on other Hamilton library stacks. Use the coupon below to get free help from Hamilton.

LIBRARY EQUIPMENT DIVISION

Hamilton Manufacturing Company

TWO RIVERS, WISCONSIN

Hamilton Manufacturing Company, Two Rivers, Wisconsin:

____Please send my copy of "Bookstacks by Hamilton," AR-2

____Send Drawings, AR-3, and Specifications, AR-4

____Send information on Hamilton's FREE Library Planning Service

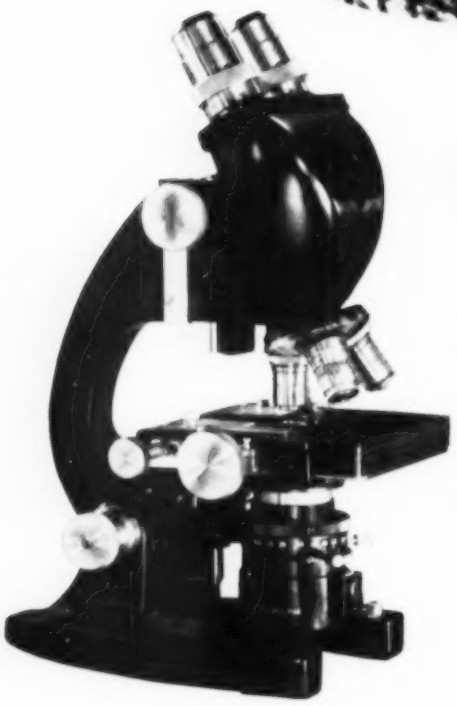
Name _____ Position _____

Firm _____

Address _____

City _____ State _____

See it Better with...



Bausch & Lomb *Research* Microscopes

Get the clearer, brighter images you want—get them quickly, easily with the world's finest, world's most versatile research microscopes. Ultra-precision fine adjustment is positioned low for operating ease; inclined parallel eyepieces, for comfortable observation. Readily adaptable for photomicrography, with phase contrast, dark field, polarized light, and exclusive Panfocal Illuminator.

Write for demonstration and catalog
Bausch & Lomb Optical Co.,
76721 St. Paul St., Rochester 2, N.Y.

1853/1953 INTO A NEW CENTURY OF OPTICAL PROGRESS
BAUSCH & LOMB CENTENNIAL

Treat Your Asphalt Tile Floors the New, Easy, Safe Way!

Now You Can Maintain Floors Daily the magic HIL-SWEEP way and Watch Dust and Dressing Vanish

only

HIL-SWEEP

gives you **all** these advantages

1. Can be used with safety on Asphalt Tile and all other types of floors, also walls, furniture, woodwork, or any surface from which dust or loose soil is to be removed.
2. Sprayed or brushed on, it picks up dust particles—then evaporates, leaving no residue, providing a dust-free floor with renewed lustre.
3. Contains *NO* emulsified oil. Leaves no oily residue to darken, discolor, soften or bleed colors.
4. Will not soften wax film.
5. Will not decrease frictional resistance.
6. NON-FLAMMABLE—has *no* flash point yet will not freeze. Rags saturated with the solution will not burn, eliminates fire hazard in use or spontaneous combustion of mop in storage.
7. Won't load mop. After using, simply shake out the brush or cloth and it's ready to use again. Saves on laundry and dry cleaning bills.

On your Staff... not your Payroll

There's a Hillyard floor expert near you. Write for his FREE help on any floor problem.

Association of School Business Officials Convention
Oct. 11-15th Hollenden Hotel
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Visit the Hillyard Booth No. 50 & 63

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St. Joseph, Mo.

HILLYARD CHEMICAL COMPANY ST. JOSEPH, MO.

Show me how to "dust-up" the improved HIL-SWEEP way. Mail free information on magic HIL-SWEEP to:

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Institution _____

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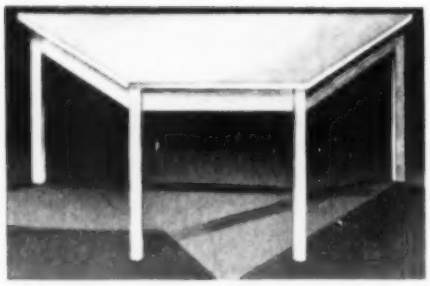
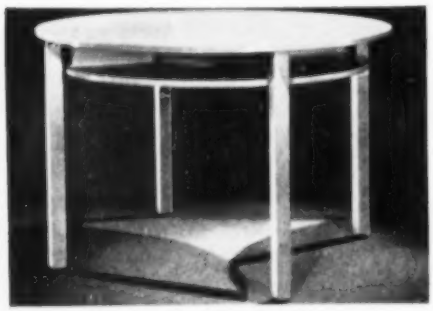
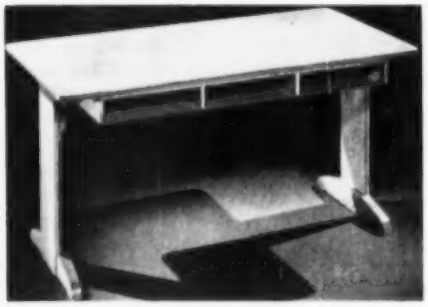
City _____ State _____



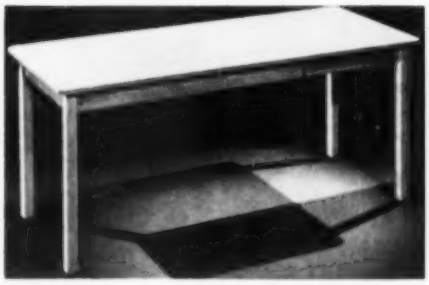
Trapezoidal Multi-Mode Table, No. 2330



Round Table, No. 2320



Study Table, No. 2310



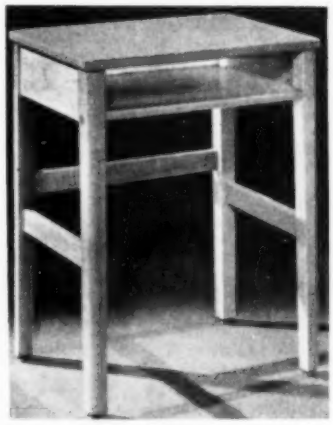
Utility Table, No. 2300

For maximum flexibility... National Modular School Furniture fulfills every classroom requirement

With the exclusive NATCOLITE Laminated School Top

Here is a complete line of multi-functional school equipment, designed to meet the specifications of modern teaching techniques. This furniture is completely versatile—easily arranged and rearranged to allow for an infinite variety of uses. Every desk and table in the National line has a Natcolite school top, surfaced with Nevamar plastic laminates in wood-grain patterns, specially developed and tested for uniform, low light reflectance and banded wtih matching Wynene plastic edging. The Natcolite top withstands years of punishment and eliminates maintenance problems, because it never needs refinishing or resurfacing. National School Furniture is highly efficient and modest in cost—adaptable to any school budget.

National School Chair,
No. 2610 Deluxe
No. 2710 Standard



National School Desk,
No. 2020 Deluxe
No. 2120 Standard

NATIONAL SCHOOL FURNITURE COMPANY

Div. of National Store Fixture Co., Inc. • **ODENTON, MARYLAND**

"Seal-O-San® is best for us . . .

ASSURES A SLIP-RESISTANT FINISH . . . DOES NOT READILY MARK OR SCUFF!"

"SEAL-O-SAN assures a slip-resistant finish for our gym floors —one that does not readily mark or scuff. Not only is the Seal-O-San surface beautiful and glossy, but it is easy to keep that way. It has reduced our application costs and daily maintenance, and assures good protection for the floors. That's why I often suggest Seal-O-San to others," writes Mr. Acker.

If your gym is the scene of many school activities—dances, banquets, plays and community meetings as well as gym classes and basketball games, you'll find Seal-O-San the ideal finish for the floor. Even under abusive use the finish stays "lively", slip-resistant and mar-free. Seal-O-San is resilient . . . that's the secret of its long protective life. When you refinish, try Seal-O-San.

Adair Acker

Director of Building Maintenance
Odessa Public Schools
Odessa, Texas

Odessa Independent School
Odessa, Texas

Seal-O-San

GYM FLOOR FINISH

FREE FOLDER

Send me your folder on lining and marking gym floors.

NAME _____ TITLE _____

SCHOOL _____

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CITY _____ STATE _____

HUNTINGTON LABORATORIES, INC. Huntington, Indiana — Toronto, Canada

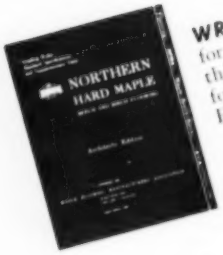
a money-saving MFMA "gymnasium" grade of

NORTHERN HARD MAPLE

"tailored from the tree"
especially to give you better average lengths, fewer end-joints, richer beauty, guaranteed soundness of wood.

the finest floor that grows

• Approved by architects and school authorities in leading cities for gymnasium floors, this fine (and relatively new) "combination grade," officially known as Second and Better, is fast becoming a favorite school specification. IT DESERVES THIS NEW POPULARITY. It matches **MFMA** First Grade in every performance attribute, yet costs less. Held to rigid **MFMA** standards of accuracy and of soundness of wood, it actually gives you 50% or better of First Grade, blended with the Second Grade areas in Nature's own colorful combinations of interesting grain patterns. Specify Second and Better, the ideal "gymnasium" grade, with fullest confidence. It makes a splendid floor of enduring beauty. YOU'LL SAVE MONEY WISELY.



WRITE for copy of this new AIA folder-style Flooring Textbook

MAPLE FLOORING MANUFACTURERS ASSOCIATION
Suite 551, Pure Oil Bldg., 35 East Wacker Drive
CHICAGO 1, ILLINOIS

See Sweet's
(Arch. 12K-MA)
or write for grading rules and new 1953 MFMA-approved list of floor finishes.

FLOOR WITH *NORTHERN* HARD MAPLE
BEECH AND BIRCH

Hotpoint has a plan to help you modernize *Home Economics Classrooms!*

The Hotpoint EDUCATIONAL PLAN

Hotpoint's Educational Plan includes a Scientific Kitchen and Home Laundry Planning Service. In addition, it provides that accredited educational institutions may purchase for instructional purposes, any of the complete line of modern Hotpoint Major Home Appliances at a saving of nearly ½ the retail cost. Also, in order that the major appliances in your school may be the newest, Hotpoint will replace, for an indefinite period and at no cost to the school, any piece of Hotpoint Equipment (except cabinets) with comparable new models.

Hotpoint's Educational Plan Is Designed to Assist You in Scientifically Arranging Your Home Economics Laboratory and Keeping It Thoroughly Modern

So that your Home Economics classroom will be a real credit to your school, take advantage of this Kitchen-Laundry planning service offered to you by Hotpoint without obligation.

Your students of today will be living with all-electric kitchens and home laundries tomorrow . . . so, naturally, you want to teach them with the most modern electric appliances.

Read the generous offer made in Hotpoint's Education Plan, and return the coupon for prompt, complete information.

HOTPOINT CO.
5600 West Taylor St., Chicago 44, Illinois
We are interested in learning more about your Kitchen-Laundry Planning Service.
Name_____
School_____
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Hotpoint ... *Pacemaker of Progress!*

RANGES • REFRIGERATORS • DISHWASHERS • DISPOSALLS® • WATER HEATERS
FOOD FREEZERS • AUTOMATIC WASHERS • CLOTHES DRYERS • ROTARY IRONERS • CABINETS • DEHUMIDIFIERS
HOTPOINT Co. *(A Division of General Electric Company)* ***5600 West Taylor Street, Chicago 44, Illinois***

SCHOOL BOILERS are easy to clean with—
TORNADO®
"There comes a time" . . . usually during the summer months, when that dreaded job of cleaning the boiler and tubes must be done.
However, for those schools using Tornado Cleaners, it's a simple, easy matter. The powerful Tornado suction (airspeeds over 300 m.p.h.) and versatile attachments do the job quickly, thoroughly—trapping all the soot and dust in the easy-to-empty tank.
This is just one of the hundreds of applications for Tornado school cleaners. They also convert to a shoulder-type vacuum or blower-sweeper. We'll be glad to tell you more if you'll just write for Bulletin 600.
Don't Forget the Other Twin
TORNADO
FLOOR MACHINE
Faster scrubbing and polishing of all tile, wood, concrete or terrazzo floors. 14", 16", 18" sizes. Write for Bulletin 619.
TORNADO
BREUER ELECTRIC MFG. CO.
BREUER ELECTRIC MFG. CO.
5098 North Ravenswood Avenue • Chicago 40, Illinois

WHAT'S NEW

September 1953

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 108. Circle the Key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Modular Lighting Units

Integrated modular ceiling elements for large area, low brightness illumination, ready for recessed mounting in suspended ceilings in multiples of 1 by 4, 2 by 4 and 4 by 4 feet, are now available in the series of Wakefield Geometrics. Known as Beta-Plex, each unit is complete, the ballasts and lampholders contained in an individual metal housing that provides for hook-on suspension points for the Wakefield Rigid-Arch Diffuser. The entire diffuser is removed by releasing the Touch-Latch, swinging down the diffuser and unhooking from the supporting frame. The diffuser panels are formed with an arch from edge to edge for rigidity. They are relatively light in weight and the surface of the plastic is of matt finish to minimize glare from below.

One Beta-Plex or a hundred may be used as separate units in an installation, in varied spacings and arrangements, maintaining complete modular coordination with other ceiling elements. Each Beta-Plex width dimension is to the exact inch, thus the entire installation can be laid out on a modular basis, with no cutting of acoustical tile required around the luminaires. Employing various Beta-Plex sizes, singly and in combination, an unlimited range of lighting designs can be created. Beta-Plex units are especially well adapted for use with the new ceiling windows. When properly placed, they supplement the overhead daylighting, providing effective illumination of the entire room or corridor.

Beta-Plex units are easy to install and easy to maintain. The Touch-Latch gives quick access to the interior for servicing. Maintenance is simplified, because starters have been eliminated through the use of Rapid-Start Lamps. Lamps are readily accessible and ballasts and wire-ways are quickly exposed by removing covers. **The F. W. Wakefield Brass Co., Dept. CUB, Vermillion, Ohio. (Key No. 404)**

Library Stacking

Compo-Stacks for library stacking have been developed by Hamilton Manufacturing Company. Books are placed on sliding shelves which push into the stack like file drawers. The sliding shelves are suspended on nylon-tired rollers and operate easily and quietly, even when loaded. They are designed so that books are accessible from the front as well as from both sides. Category or subject of the material is usually indicated on front-facing books. These can be examined

without moving the shelf. The shelf is easily pulled out for reference to volumes on the rear portion.

The principle of the Compo Stack permits more compact shelf arrangement, increasing available space for book storage. The units are equally adaptable for converting existing facilities and for new installations. They are available in sizes to meet all types of library storage requirements. **Hamilton Manufacturing Co., Dept. CUB, Two Rivers, Wis. (Key No. 405)**

Paint Strippers

Oakite Composition No. 56 and Oakite Composition No. 57 are two products designed for stripping of a wide variety of alkaline-resistant paints and lacquers. Both are non-inflammable and contain no phenols, cresols, acids or alkalies. They are designed for tank immersion or brush-on stripping. **Oakite Products, Inc., Dept. CUB, 19 Rector St., New York 6. (Key No. 406)**

(Continued on page 92)

Conductance Tube Tester

Fast testing with convenient ohms readings for leakage and shorts is a feature of the new Simpson Model 1000 Plate Conductance Tube Tester. It will test any receiving tube, including 9 pin miniatures and subminiatures with base arrangements in line or circle. Testing tubes is simple, positive and accurate with the new instrument which has handy multi-position toggle switches for quick adjustments to proper voltages for bias, screen and plate supply. Each tube element is individually connected to the proper potenital to ensure against tube damage during testing. Simpson Snap-Out-Snap-In transparent plastic windows are provided over the fast-action roll chart. **Simpson Electric Co., Dept. CUB, 5200 W. Kinzie St., Chicago 44. (Key No. 407)**

Transcopy Duplex

Only one machine is required to make photocopies in less than a minute with the Transcopy Duplex. Developing, washing, fixing or drying are all done in the one machine which makes finished, photo-exact, positive copies of any record, regardless of type or color, from originals up to 14½ inches wide in any length. The single machine contains both a printer and a processor. It is small, light and compact and takes up a minimum of space. No special installation is required as the machine operates by being plugged into any elec-

trical outlet. No darkroom is needed. **Remington Rand Inc., Dept. CUB, 315 Fourth Ave., New York 10 (Key No. 408)**

Take this chair, for instance. There are no dowels or screws to give you trouble. The cushions are loose . . . which makes cleaning a cinch (they're foam rubber, incidentally). Stainless steel glides encased in rubber . . . a Woodard exclusive . . . keep your floors from getting scratched. Yes, for easy and economical maintenance . . . there's nothing like Woodard wrought iron. For style, either . . . for that matter.

in New York: One Park Avenue
in Chicago: 1645 Merchandise Mart
in Boston: 92 Newbury Street
in Los Angeles: 8800 Beverly Boulevard
in San Francisco: 312 Sutter Street

LEE L. WOODARD SONS
style authority in wrought iron
OWOSSO, MICHIGAN

for catalogue or information—write Dept. C

Now... take

WROUGHT IRON

FROM OUR NEW GROUP... THE PINECREST

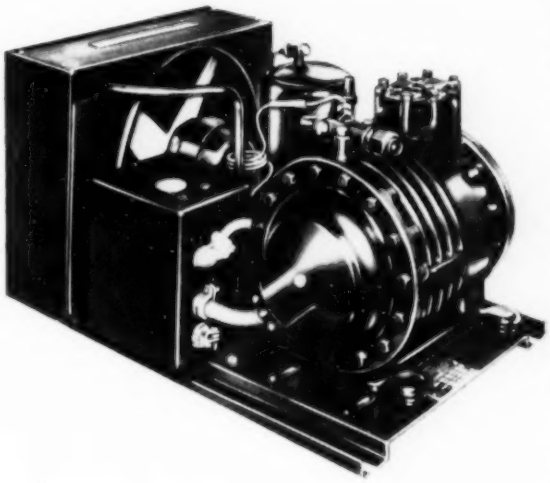
Tops for Dependable, Economical Refrigeration . . .

The New Frigidaire XD Meter-Miser!

Extra Protection
Liberal 5-Year Warranty offers proof of real protection against major service expense.

Extra Economy
Saves and saves in operation and maintenance over conventional compressors. Eliminates parts which cause most service calls.

Extra Compactness
Takes less floor space than conventional compressors of comparable capacity. Lighter weight combined with resilient mountings allow greater flexibility in installation.

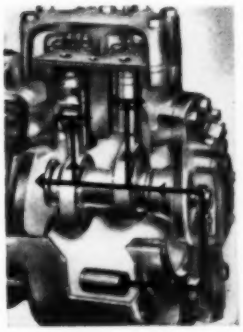


Extra Quality
Built from the inside out to most rigid precision standards and from highest quality materials.

Extra Efficiency
Years ahead design gives high output and low operating cost.

Extra Operating Life
Direct-drive, refrigerant-cooled motor, special bearings, pressure lubrication, guarantee day-in, day-out dependability.

Designed to stop trouble before it starts!



Full pressure lubrication means long life

Continuous lubrication under pressure to all moving parts furnished by special oil pump. The end result is reduced friction and wear. This is another typical example of the extra quality features that mean long, trouble-free operation.

Here's the sensational new Frigidaire Compressor that's built to keep trouble away . . . built to banish the causes of 70% of all compressor service calls. Direct drive eliminates fly-wheels, motors, pulleys, compressor belts, and shaft seals. It's sealed against moisture, dirt, dust, and air; yet *all* parts are fully accessible for inspection and maintenance.

Here's why XD means Extra Duty! Full-rated capacities assure delivery of full cold-making power. Extra dependability with filtered oil delivered under pressure to every bearing surface. Extra motor life with windings cooled by refrigerant gas to operate at much lower temperatures. Available in air cooled models, $\frac{1}{3}$ to 3 hp, water cooled models, $\frac{1}{2}$ to $7\frac{1}{2}$ hp. Call your Frigidaire Dealer—his name is in the Yellow Pages of your phone book. Or write Frigidaire, Dayton 1, Ohio. In Canada, Toronto 13, Ontario.

Frigidaire Compressors

BUILT AND BACKED BY GENERAL MOTORS

The most complete line of air conditioning and refrigerating products in the industry

What's New . . .

Tablet Arm Attachment

A detachable tablet arm can be readily attached to the Brunswick classroom chair to form a tablet arm chair. This is one of the facets of the four-in-one feature which makes it possible to convert the basic classroom chair for use as a tablet arm chair, a guest chair or a chair desk. The uni-structure frame of the chair provides complete support without relying on the chair seat or back as a bracing factor. Comfort and quietness are provided by this resilient structure combined with rubber-mounted floor glides.

The tablet arm has a five-degree slope for added writing comfort and is so designed that writing paper can be placed at normal writing position. The arm is available in either right or left hand units and in a choice of durable ⅛ inch thick plywood with or without a plastic facing, or in a ¾ inch thick solid wood top. A book rack is available as an optional item on the tablet arm chair. **Brunswick-Balke-Collender Co., Dept. CUB, 623 S. Wabash Ave., Chicago 5. (Key No. 409)**

Magnetic Tape Recorder

The new 110 volt AC Magnematic Portable Tape Recorder is completely operated by push-button control. It is light in weight and attains long range frequency response. It is designed to produce high quality tapes with simplicity of operation. The Magnematic is ruggedly constructed to withstand use as a portable unit and is designed to provide maximum stability and dependability of performance. The unit is 8½ by 11 by 9 inches in size and has superior electrical and mechanical performance for its size. Six models are available in three speeds with playing time up to one hour. **Amplifier Corporation of America, Dept. CUB, 398 Broadway, New York 13. (Key No. 410)**

Spectrograph

Designed to bring precision spectography within the reach of colleges, hospitals and even high schools, the new 1.5 meter stigmatic grating spectograph is available in two models. Both are capable of analyzing a wide range of non-ferrous materials and are suitable for use on the more complex spectra of unalloyed gray irons, plain carbon steels and low-grade ores. Weighing only 150 pounds, the instrument is 12 inches high, 18 inches wide and 60 inches long. The compact size and freedom from moving parts and adjustments were designed to meet the needs of institutions and of inexperienced spectographers. **Bausch & Lomb Optical Co., Dept. CUB, 635 St. Paul St., Rochester, N. Y. (Key No. 411)**

Ground Maintenance Attachment

New attachments for the five h.p. Gravely Tractor have been developed which will aid substantially in maintenance of grounds. Included are a heavy duty 30 inch Rotary Knife Mower with cutting height easily adjusted between ¾ and 3 inches. Detachable fenders allow the mower to handle either fine lawn grass or tall weeds efficiently and a low-priced optional assembly converts the unit to a leaf mulching attachment. The mower blade is file-tempered for easy sharpening in the field. The mower

is equipped with a slip clutch which dissipates the shock when the mower strikes an obstacle.

A feature of the new attachment is that the Gravely Chain Saw or Circular Saw can be quickly attached to the same drive. The Chain Saw can be clamped in any position and moved to any angle, permitting sawing to be done in a comfortable standing position. The 18 inch Circular Saw, attached to the same drive, cuts small timber and sprouts off at ground level. The new combinations bring the total of attachments powered by the Gravely Tractor to twenty-one. **Gravely Tractors, Inc., Dept. CUB, Dunbar, W. Va. (Key No. 412)**

Dynel-Blend Blanket

A new Dynel-Rayon Blend blanket has been introduced. Features of the new blanket include low shrinkage, excellent warmth, good shape retention, color fastness, long wear and a complete lack of electrostatic properties. It is available in bright clear colors, including Casino Red, Hunter Green, maize, rose, chartreuse and blue. **Pepperell Mfg. Co., Dept. CUB, 160 State St., Boston 2, Mass. (Key No. 413)**

(Continued on page 96)

Automatic Vegetable Peeler

Gifford-Wood automatic vegetable peelers, in units to peel 15, 30 or 50 pounds of vegetables in 45 to 60 seconds, are now being made available to institutions. The units peel whole potatoes, turnips, carrots and similar vegetables quickly and thoroughly with minimum peeling losses. An automatic shut-off timer ensures minimum waste. The one-piece vegetable hopper has a Cast-In-Carborundum interior surface. The Cast-In-Carborundum process involves a fusing of carborundum and metal in the casting process which produces an abrasive surface of extreme durability.

Two models are available, the Royal and the Superior. The hopper in the Royal is mounted on a cabinet and may be positioned to discharge vegetables from any side. The peel trap is built into the cabinet and is easily reached for emptying. The model is available in various heights to allow discharge into sinks 32, 34, 36 or 38 inches high. The Superior model is mounted on rugged fabricated steel legs with a dripproof motor located adjacent to the hopper. The peel trap, if required, is attached to the side of the base. Both models are protected by several coats of special corrosion resistant base paint and finished with a hard gloss enamel. **Gifford-Wood Co., Dept. CUB, Hudson, N. Y. (Key No. 414)**

"Pebble Ice" Maker

The new Ajax "Pebble Ice" Maker produces quantities of small, dry ice pellets similar to crushed ice. It is a small, cabinet unit taking less than one square yard of floor space, and 39 inches in height, suitable for counter installation. The machine is simple, with only three moving parts, and is available in three capacities: 200, 400 or 800 pounds of ice per day. The unit has an automatic shut off switch which controls ice overflow, no

matter what type of storage container is used. **Ajax Corp. of America, Dept. CUB, 2509 Washington Ave., Evansville, Ind. (Key No. 415)**

falling...
or rising?
A few false prophets have said that tape recording will replace discs entirely. But don't be deceived by such assumptions.
Sales figures prove that the use of PRESTO discs has shown a steady increase during the past year. They prove something else, too . . . that more broadcasters, recording companies, and schools prefer PRESTO to any other disc.
The reason is plain . . . PRESTO discs are manufactured from superior aluminum and finer lacquer . . . produced in the world's most modern disc plant . . . and inspected and selected for *quality*.
Yes, the use of PRESTO discs is going *up* not down . . . and PRESTO "Green Label" brand are flying highest of all.
PRESTO RECORDING CORPORATION
PARAMUS, NEW JERSEY
EXPORT DIVISION: 25 Warren Street, New York 7, N. Y.
CANADIAN DIVISION: Walter P. Downs, Ltd., Dominion Square Bldg., Montreal
WORLD'S LARGEST MANUFACTURER OF PRECISION RECORDING EQUIPMENT AND DISCS

LIFTS DIRT FROM FLOORS... HOLDS IT OFF...

CINDET

100% ACTIVE 100% SAFE!

NEW LIQUID SYNTHETIC DETERGENT

Whether your water supply is HARD or SOFT, cleaning with CINDET means *no curds, no dingy film!* CINDET is *surface-active*—it works on the principle of LIFTING floor dirt, grease and old water-emulsion wax from floors and HOLDING it in suspension in a fluffy mass of energetically-cleaning SUDS. *Dirt is not re-deposited*—rinses off easily.

Dilute a little CINDET in HARD or SOFT water . . . apply with clean mop . . . let foamy, clean-looking suds stand 5 or 10 minutes . . . scrub only if necessary, and rinse thoroughly. The result: AMAZINGLY BRIGHT, CLEAN FLOORING.

Safe for *all* flooring—and wonderful for removing stubborn rubber marks. Also excellent for walls, for shampooing rugs and upholstery, for washing dishes by hand.

DOLGE backs up CINDET with a complete-satisfaction-or-deal-is-off GUARANTEE! Write for literature; have your DOLGE SERVICE MAN demonstrate CINDET on *your dirtiest, greasiest flooring.*

...THE SUDS DO THE WORK!

FOR **FREE** SANITARY SURVEY of your premises consult your DOLGE SERVICE MAN

dependable

DOLGE

WESTPORT, CONNECTICUT

Checker

This Modern Steel Rack

Accommodates 50 in 5 Feet!

Keep wraps aired and in press—save space . . . lengths to fit in anywhere. Individual coat rack units for self-service or complete Check-room layouts with the "One Check" numbering system. Six, 12, and 24 place costumers. Combination rack and locker units or complete locker rooms.

Checker equipment is widely used in schools, public buildings and institutions. Standard with leading architects.

Stationary—Portable. *Write for Bulletin No. CK25.*

VOGEL-PETERSON CO.
1121 West 37th St. • Chicago 9, Ill.

this sword means Cancer EDUCATION

Words of truth and hope from the American Cancer Society save many lives each year from cancer . . . could save thousands more.

Under the sign of the cancer sword you and your neighbors can learn vital facts . . . your physician can secure information on diagnosis and treatment. Cancer Strikes One in Five. Your Dollars Strike Back.

Mail Your Gift to "Cancer" Care of Your Local Postoffice

AMERICAN CANCER SOCIETY

Quiet comes to a troublesome "Noise Center"

The hubbub of loud voices, shuffling feet, constant activity once made this beautiful foyer a noisy headache. Every sound echoed and re-echoed. The irritating din filtered into classrooms . . . distracting students and instructors, impeding distinct hearing, slowing progress.

Low-Cost Answer

But it's different now. Disturbing sounds are arrested at the source by economical Acousti-Celotex Sound Conditioning! A sound-absorbing ceiling of Acousti-Celotex Tile "blots up" noise, brings quiet comfort not only to foyers, but also gyms, cafeterias, libraries and study halls. In auditoriums, classrooms and music rooms—it improves acoustics, creates conditions favorable to good hearing.

DOUBLE-DENSITY—As the diagram shows, Acousti-Celotex Tile has two densities. *High density* face, for a more attractive finish of superior washability, easy paintability. *Low density* through remainder of tile, for greater sound-absorption value.

Easy Maintenance

Acousti-Celotex Tile is quickly installed, requires no special maintenance. Its remarkable *double-density* feature (see diagram) defies warping—provides a surface of unusual beauty and washability. Can be washed *repeatedly* and painted *repeatedly* with no loss of sound-absorbing efficiency!

MAIL COUPON TODAY for a Sound Conditioning Survey Chart that will bring you a *free analysis* of the noise and acoustical problems in your school, plus a factual free booklet, "Sound Conditioning for Schools and Colleges." No obligation!

ACOUSTI-CELOTEX

TRADE MARK REGISTERED U. S. PAT. OFF.

Sound Conditioning

Products for Every Sound Conditioning Problem—The Celotex Corporation, 120 S. La Salle St. Chicago 3, Illinois • In Canada: Dominion Sound Equipments, Ltd., Montreal, Quebec

Mail today

The Celotex Corporation, Dept. T-93
120 S. La Salle St., Chicago 3, Illinois

Without cost or obligation, send me the Acousti-Celotex Sound Conditioning Survey Chart, and your booklet, "Sound Conditioning for Schools and Colleges."

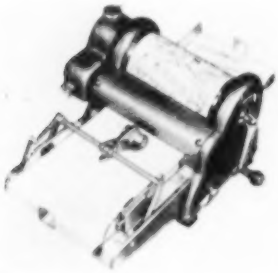
Name _____

Address _____

City _____ Zone _____ State _____

What's New . . .

Copy-Rite Duplicator



A "two-way" pressure control, permitting the retaining of pressure setting found to be most desirable for particular runs, is the outstanding feature of the new Model L-54 Copy-Rite Duplicator. The selected setting remains in effect until changed by the operator, even when the roller pressure is released after a job is finished. This feature is designed to assure the same pressure for all copies, eliminating experiments to match pressure adjustments.

The new model also features the Positive Margin Adjustment for raising and lowering the master to position copy exactly on each sheet and assure faster, neater work. The Complete Roller Release is designed to prevent "flat spots" and frequent roller replacement. The new Fluid Container of all-aluminum follows contour of the machine and the indicator permits easy measurement of fluid level. **Wolber Duplicator & Supply Co., Dept. CUB, 1203 Cortland St., Chicago 14. (Key No. 416)**

Gas Burners

A new series of commercial gas burners has been introduced in stock sizes ranging from 450,000 b.t.u. input upward to 11,520,000 or more. The new multiple section upshot burner is easily installed through the ash pit door. The numerous possible combinations of burner heads make it possible to apply the burner for the most effective use of the fire box area. No refractory combustion chamber liner is used. A metal plate set flush with the burner heads prevents heat from reaching the boiler base and reduces boiler room temperature. With recommended controls, the burner is step-acting and is modulated so that various burner sections come on in sequence. Sections may be controlled by independent manual or by automatic valves. **Petro, Div. of Iron Fireman Mfg. Co., Dept. CUB, 3170 W. 106th St., Cleveland 11, Ohio. (Key No. 417)**

Fiberglas Ceiling Board

A new sound control ceiling is offered in non-combustible Fiberglas Sonofaced ceiling board. The board, measuring 24 by 48 inches and ¾ inch thick, is faced with plastic film. It controls noise, is easy to clean, has high light reflection qualities and provides efficient insulation. The film facing transmits sound by diaphragmatic action into the air spaces formed by the intertwining fibers of glass.

The Fiberglas boards are suspended by means of a simple system of exposed metal sections which form a supporting grid. They can be arranged in various patterns. Any of the boards may be removed from below the ceiling, providing easy accessibility to the area above. The new board is available in white, slate blue, sea green, chartreuse, beige and coral. **Owens-Corning Fiberglas Corp., Dept. CUB, Toledo 1, Ohio. (Key No. 418)**

Console Cabinet

Designed to house the recently introduced Rek-O-Kut model B-16H three-speed turntable, the new Model C-7B

Console Cabinet has two storage compartments. The cabinet accommodates the new turntable without the need for screws or bolts and the turntable floats on felt. The doors of the storage compartments swing on piano hinges and have flush ring latches. Adjustable levelling casters keep the cabinet stable. It is finished in metallic gray. **Rek-O-Kut Company, Dept. CUB, 38-01 Queens Blvd., Long Island City 1, N. Y. (Key No. 419)**

Nucite Glass Chalkboard

The problem of breakage is said to have been eliminated in the improved Nucite glass chalkboard recently introduced. Another feature of the new board is the ease with which it can be erased. The new board is made by fusing a colored vitreous material to the face of plate glass. A special glass tempering process gives the glass greater ability to withstand shock and injury and eliminates the possibility of shattering. A coating of mastic, applied to the back of the board, provides an added factor of safety.

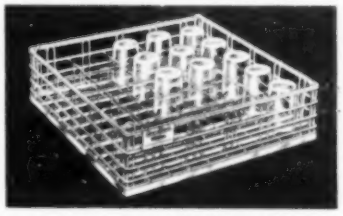
The improved vitreous enamel surface of Nucite boards is smoother and the finish is more durable. The new surface takes a clean, legible chalkmark and is easy to keep clean. Light reflection and glare factors are held to a minimum. The new board is available in green and black. **New York Silicate Book Slate Co., Inc., Dept. CUB, 541 Lexington Ave., New York 22. (Key No. 420)**

Floor Machine

Designed especially for smaller areas, the new Johnson's Wax Special 12 is an economical floor maintenance machine. It has many of the features of the larger heavy-duty floor machines and can be used for waxing, scrubbing, shampooing rugs, sanding or buffing. It can be used conveniently under fixed furniture and in confined quarters as it is only 11 inches high. It is balanced for fast, effortless operation and has patented finger springs on brush brackets to keep the machine riding level at all times. The adjustable handle can be set to a convenient operating height and can be quickly raised to upright position for storage. A fingertip-controlled trigger switch and a wire whisker in the brush are safety features of the machine. It has a ¼ h.p. motor and quick-change attachments are available to make it an all purpose machine. **S. C. Johnson & Son, Inc., Dept. CUB, Racine, Wis. (Key No. 421)**

Glass Rack

A new 36 compartment Sani-Stack glass rack is now available with individual welded cells for each glass. It provides protection against scratching and "frosting" which occur when glasses come in contact with each other, and is designed for use in transporting, washing and storing glasses. The racks can be stacked for easy and convenient storage of glasses and for placing on trucks and dollies for moving glasses to and from storage cupboards. The racks are made of low carbon bright basic steel dipped in molten tin after fabrication. They can be obtained in all sizes for every type



glass and every model dishwashing machine. **Metropolitan Wire Goods Corp., Dept. CUB, 70 Washington St., Brooklyn 1, N. Y. (Key No. 422)**

(Continued on page 100)

An Economical and Practical Answer to an Old and Costly Problem in College Upkeep

DESK TOPS

WORK SURFACES

CAFETERIA TABLES

Use G-E Textolite* Plastics Surfacing on desks and all work surfaces

Cut Down on Costly Repairs Now . . . Insure More Years of Maintenance-Free Service

- **Immune to inks, paints, fruit juices, crayons, clay.**
- **Stain-free — easily cleaned with a damp cloth.**
- **Glare-free — germ proof — scuff and mar-proof.**
- **Moisture-proof, nonporous surface. No polishing necessary.**
- **Available in a wide range of beautiful patterns and colors, including wood grains.**

Restore desk tops and other work surfaces with rugged G-E Textolite. Reclaim many years of economical use from college furniture by resurfacing damaged tops with this scuff and mar-proof material.

G-E Textolite plastics surfacing is made by the General Electric Company and distributed nationally by Roddiscraft warehouses. It is produced in a wide variety of colors, patterns and wood grains to suit a range of needs in class rooms, laboratories, cafeterias. G-E Textolite on all work surfaces will insure years of maintenance-free service in new installations, add years of useful life to old ones.

Investigate — call in a Roddiscraft representative from any of the warehouses listed below, or write for complete information.

*Reg. U.S. Pat. Off.

Roddiscraft

RODDIS PLYWOOD CORPORATION
Marshfield, Wisconsin

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge 39, Mass. • Charlotte 6, N. C. • Chicago 32, Ill. Cincinnati 4, Ohio • Cleveland 4, Ohio • Detroit 14, Mich. Kansas City 3, Kan. • Los Angeles 58, Calif. • Louisville 10, Ky. Marshfield, Wis. • Miami 38, Fla. • Milwaukee 8, Wis. • New Hyde Park, L. I., N. Y. • New York 55, N. Y. • Port Newark 5, N. J. • Philadelphia 34, Pa. • St. Louis 16, Mo. • San Francisco 24, Calif. • San Leandro, Calif.

New Lower Prices!

AMERICAN SEATING FOLDING CHAIRS OUTLAST ALL OTHERS!

UNEQUALED FOR STRENGTH

Engineered like a bridge of triangular steel tubing! The four reinforcing cross-braces are rugged steel bars, shouldered against the inside of the tube and securely riveted outside.

UNEQUALED FOR COMFORT

Even portly people relax and say "Ah-h-h!" as they sit back in the extra-wide, extra-deep seats of special body-fitting design, their shoulders welcomed by deep-drawn back panels.

UNEQUALED FOR SAFETY

There are no snagging, pinching, or soiling hazards, no sliding or binding parts to pinch fingers. 5-ply birch plywood seats are hot-press bonded; edges rounded, won't chip or feather in long use. Chair can't tip forward in use.

UNEQUALED FOR CONVENIENCE

These chairs fold quickly, quietly, compactly, and are silent in use as well. Long-life tread-rubber shoes won't come off in use, cannot injure finest floors; can't slip, slide or rattle.

LOWEST PER-YEAR COST!
OVER 10 MILLION IN USE!
OUTNUMBER ALL OTHERS IN SCHOOL USE

3 POPULAR SEAT STYLES

No. 54—*5-ply formed Birch Plywood*, hot-press bonded to permanent body-fitting comfort-shape. **No. 53**—*Shaped Steel* for rugged outdoor or indoor use. **No. 56**—*Imitation leather Upholstered*, highest quality material over cotton padding on plywood base.

ALL METAL PARTS corrosion-resistant Bonderized, followed by two coats of enamel—one coat dipped to insure internal coverage of tubes, eliminating rust and noise—an effect similar to automobile undercoater.

MAIL COUPON TODAY!

American Seating Company

DEPT. 12, GRAND RAPIDS 2, MICHIGAN

☐ Please send your latest brochure on AMERICAN SEATING FOLDING CHAIRS.

☐ I am interested in _____ (quantity)

☐ Birch seats ☐ Steel seats ☐ Upholstered seats

Name or School _____

Street _____

City and Zone _____ *State* _____

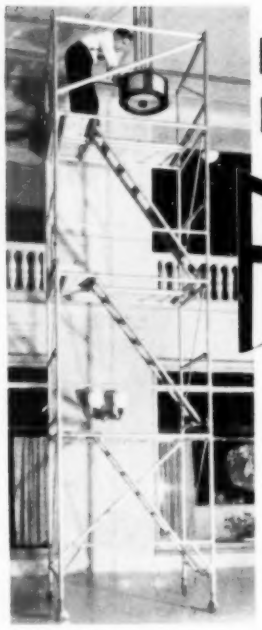
Individual and title _____

HANDY STORAGE TRUCKS

Four styles, for general or under-stage use. Permit easy, fast, convenient storage. Swivel casters, removable handles, ample capacity.

Clamps for Sectional Grouping. Permit fastening chairs in sections of two, three, or four, one inch apart.

Steel Threshold. Available to lock chairs into position at ends of rows, 30" back to back, for three or more rows.



No Acrobatics! No Flip-Flops!

with the

FOLD-A-WAY

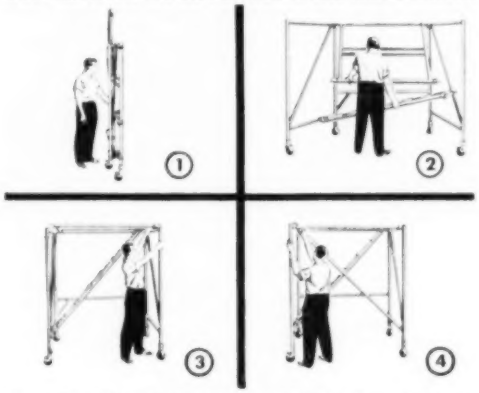
TRADE MARK

SCAFFOLD

ALUMINUM

Underwriters' Laboratories approved

HERE'S WHY: For erection, the end frames of this new aluminum scaffold swing open sideways, as shown below. Maximum swing of any component is 90 degrees, so the erector is always *within* the base area. One man erects the base section in less than a minute.



The FOLD-AWAY Aluminum Scaffold stands freely and will not "fold under" during erection. Superior construction features include coped and *full-welded* joints LOKT-RING adjustable legs with casters that lock at both wheel and swivel.

Write for illustrated Bulletin ASF-1

Aluminum Sectional Ladder Scaffolds

are extremely mobile. 24" width permits use in restricted areas. 6', 8' and 10' spans; ladders 4'3", 5'8" and 6'1" high, slip together easily for desired height. Underwriters' Laboratories approved. Write for Bulletin AS-2.

Gold Medal Ladders Scaffolding

For Greater Safety...Efficiency...Economy

THE PATENT SCAFFOLDING CO. INC.

38-21 12th Street Dept. CLB Long Island City 1, N. Y.
6931 Stanford Ave., Los Angeles 1, Calif.
Branches In All Principal Cities

Streamline your figuring

with the

Burroughs Multiple-Total Adding-Subtractor

To simplify the steadily increasing problem of efficient figure handling, there's no better answer than this new Burroughs Multiple-Total Adding-Subtractor. It has proved in use to be a versatile and agile performer on a great variety of jobs for municipalities, counties, and other governmental bodies.

Here's a flexible unit that features two accumulating registers . . . adds *and subtracts* in either or both . . . accumulates individual group totals and the grand total simultaneously, without recapping.

Exclusive alternating register control provides for the quick, easy selection of either register . . . for simultaneous addition and subtraction in both registers . . . for automatic alternate selection of registers. And easy-to-read symbols to the right of every amount instantly identify all machine operations and the register used.

Modern in design . . . compact . . . lightweight—this all-new Burroughs can effectively streamline your figuring operations, to save you time and money. And it's available in 10-column and 13-column models, with wide or narrow carriage. Call the Burroughs branch office near you today, or write Burroughs, Detroit 32, Michigan.

WHEREVER THERE'S BUSINESS THERE'S

Burroughs

What's New . . .

Tape Recorder

The "Tru-Fidelity" Tape Recorder is a new unit designed as a working tool for educators, scientists and other professional people. It has a minimum of moving parts and is of rigid, heavy-duty construction. It has dual track, and operates at two speeds, 7½ and 3¾ inches per second, with a fast forward of 100 seconds and rewind of 80 seconds for 7 inch reels.

The recorder is relatively light in weight and has a single tape motion selector, keyboard facility selector, tape counter, positive safety erase, tape copying facility and the "Magic Eye" recording level indicator. Separate inputs for microphone, radio and phonograph are provided and the machine is easy to service. There are separate treble and bass controls, public address system and headphone monitoring. **DuKane Corporation, Dept. CUB, St. Charles, Ill. (Key No. 423)**

Plate Exposure Unit

A new photo-offset plate exposure unit has been added to the line of duplicating products manufactured by A.B. Dick Company. The new 106 plate exposure unit makes it possible for the offset duplicator owner to make professional halftone picture-reproducing plates in a minimum of time.

Features of the new unit include a self-adjusting contact frame which compensates for negatives of uneven thicknesses; simple adjustment to increase pressure between negative and plate; operation which permits part of a film negative to be exposed without cutting or remasking, and "picture window" design to keep work in full view. **A. B. Dick Co., Dept. CUB, 5700 W. Touhy Ave., Chicago 31. (Key No. 424)**

Binding Punch

An electric-powered punch has been added to the equipment offered to facilitate the binding of loose pages of records, catalogs, literature, reference and other material. The Model 116-EP is an electric power punch which can handle up to 20,000 sheets per hour. It supplements the smaller punches available in the line. The cost of the new machine for high speed punching is relatively low and the design and construction have resulted in a machine of relatively light weight. It requires no special tools for set up, no special wiring and no special operator training. The unit saves floor space, is durably constructed and is streamlined in design. **General Binding Corp., Dept. CUB, 812 W. Belmont Ave., Chicago 14. (Key No. 425)**

Folding Bench and Table

Designed for use in classrooms, cafeteria, gymnasium and other areas which can be quickly converted for various uses, the new Howe table and bench combination also serves as a bench with back rest, with the table folded and one bench open. With both table and one bench open it forms a two-tier bleacher arrangement. Benches can be detached and the table used separately if desired. The unit has a foolproof locking device in both open and folded positions and opens and folds simply and quickly.

Tables are 30 by 72 by 27 inches in size and benches are 10 by 72 by 16 inches. Tables are of ⅞ inch plywood core, sealed top and bottom with tan

linen Formica. Legs are one inch heavy gauge steel tubing, zinc plated. The unit is of rugged construction. **Howe Folding Furniture, Inc., Dept. CUB, 1 Park Ave., New York 16. (Key No. 426)**

Fire Protection Unit

Designed especially as a fire protection package for institutions and other public buildings is the new Elkhart Hose Cabinet. The wall cabinet, with satin-finish extruded aluminum door and trim, may be installed after plastering so that the architecturally designed trim and door are kept free from damage during construction. The new light weight, strongly constructed cabinets are available in a variety of sizes to meet local requirements. The cabinets fit flush to the wall and are glazed with high quality glass, cushioned in concealed rubber channels.

Contents of the cabinet include an angle valve with 75 feet of unlined linen hose mounted on a one-piece rack, equipped with Elkhart fog nozzle, plus a 2½ inch valve for use by local fire fighters, a 2½ gallon fire extinguisher, fireman's axe and spanner wrench. Cabinets may also be made to hold a hand extinguisher only. Standard sizes come in five widths and three heights. The cabinet door has a cam type locking device. **Elkhart Brass Mfg. Co., Inc., Dept. CUB, 1302 W. Beardsley Ave., Elkhart, Ind. (Key No. 427)**

Cold Food Servers

The serving of cold or frozen foods without chipped ice is now possible with the new Tempinware Servers. A permanent eutetic refrigerant is sealed inside the inner walls of the serving dishes. Stored in a freezing compartment, the refrigerant absorbs the cold and remains frosted for as long as one hour when in use. It holds the food at a lower temperature than ice.

For serving, the Tempinware is removed from the freezer, food is placed in the insert or inter-liner and then placed in the Tempinware bowl. The containers are made in a choice of durable metals, including silver plate if desired. Each set consists of a food liner, refrigerating bowl and underliner. Where chipped ice service dishes are already available, they can be used instead of the underliner. Tempinware is designed for serving ice creams, sherbets, fruits, fish and vegetable cocktails and similar foods. **Redi Products Corp., Dept. CUB, 60 N. Sierra Blvd., Pasadena 8, Calif. (Key No. 428)**

Sewing Machine Cabinet

Designed to be a part of the home-making area of the Home Economics Department, the Mutschler Sewing Machine Cabinet makes it easy to bring the machine out for use by sewing classes and to store it safely away when the room is being used for other purposes. The cabinet is built of maple and is available in natural maple and white or colored enamel finishes.

Without the top, the cabinet is 34½ inches high and 24 inches wide. The 1½ inch top has Formica surface and edge banding for long wear and easy cleaning. The unit extends 40 inches from the cabinet face for comfortable use by student or instructor. It has two

drawers and a full width sliding bottom shelf. **Mutschler Brothers Co., Dept. CUB Nappanee, Ind. (Key No. 429)**

(Continued on page 104)

Adaptable, durable -the ideal furniture for any student room

The double desk has two roomy shelves on each end, a spacious drawer on each side. Cabinet tops and edges are cigarette burn-proof Micarta. Chairs have saddle seats and wall-saver legs.

The beautiful, mahogany and hackberry woods are finished in Durabake, a baked-on finish developed by Tomlinson, impervious to alcohol, alcohol derivatives and other stains.

This comfortable Tradewinds easy chair has a reversible seat cushion and wall-saver legs.

Furniture for college rooms must be smartly designed, versatile, compact and comfortable, yet constructed to take exceptionally hard usage. Handsome Tradewinds answers all these specifications. Backed by a great name—Furniture by Tomlinson—with over half a century's leadership styling furniture of unmatched value, this furniture is painstakingly crafted to give years of service. For complete facts and the name of your nearest dealer, write to Contract Division, Furniture by Tomlinson, High Point, North Carolina.

TRADEWINDS

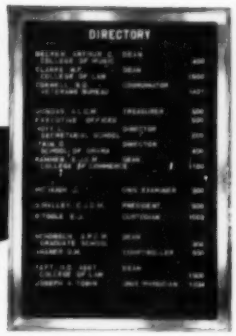
Furniture by TOMLINSON

TM REG. U.S. PAT. OFF.

FOR STUDENT ROOMS, LOUNGES, DORMITORIES, SORORITIES AND FRATERNITIES

100

DIFFERENT SIZES, STYLES OF BULLETIN BOARDS AND CHANGEABLE LETTER BOARDS



BY DAV-SON

A Dav-Son board for every job. Changeable letter directory and announcement boards, black boards, menu boards, others. Sturdily constructed, every Dav-Son board is built to last, with quality built-in for years of service.

Dav-Son Changeable Letter Directories for Lobby, Office, Outdoor Use.
- Wide Variety of Styles and Sizes
- Glass Enclosed Front
- Hardwood or Metal Frames
- Highest Quality Felt
- Absolutely Warpproof
- Also Available with 5' 5" Standards

Dav-Son Genuine Self-Sealing Cork Bulletin Boards
- Indoor and Outdoor Styles
- Hardwood or Metal Frames
- With or Without Locking Glass Doors
- World's Largest Selection

DEALER INQUIRIES INVITED
If Your Dealer Can't Supply, Order Direct

DAV-SON

J.F.HESTER

Dav-Son Changeable Name Plate Black card with white letters under beveled plexiglass shield. Triangular wood base in choice of Walnut, Oak, Mahogany, Blonde or Steel Grey finish. 10½"x2½"

A. C. DAVENPORT & SON, INC.
311 N. DESPLAINES STREET, CHICAGO 6, ILLINOIS, DEPT. CB

INSIST ON DAV-SON—YOUR BEST BUY!

STAINLESS STEEL REFRIGERATORS by HERRICK

Performance-Proved

at Chicago's

HOTEL CONRAD HILTON

HERRICK units were supplied by Duparquet, Inc., 225-235 N. Racine Ave., Chicago, Ill.

HERRICK Stainless Steel Refrigerators serve the Hilton's kitchens, coffee shops and cocktail lounges. Above is a HERRICK 20-door model used in the hotel's Banquet Kitchen. Wherever complete food and beverage conditioning is called for, HERRICK does a perfect job! HERRICK is unequaled for superb, low-cost-per-year performance. Write today for the name of nearest HERRICK supplier.

HERRICK REFRIGERATOR CO., WATERLOO, IOWA
DEPT. C, COMMERCIAL REFRIGERATION DIVISION

HERRICK *The Aristocrat of Refrigerators*

HUSKIEST CHAIR MADE

BTC

Hostess FOLDING CHAIR

- Choose the chairs that are made for long years of service—BTC Hostess Folding Chairs. Their husky, all-steel frames withstand hard use in hotels, institutions and schools.
- Hostess Folding Chairs are comfortable, non-squeaking, easy to set up and take down. Choice of most radio and TV stations. Come in 6 handsome baked enamel finishes and 8 beautiful plastic coverings. Full-size seats and backs fold together to safeguard upholstery in storage. Attachments for alignment and row-spacing—also portable hand trucks for storing 24 or 36 chairs.

FREE FOLDER Send for new, full-color folder describing complete line of Hostess Folding Chairs and Banquet Tables.

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Branch Offices and Warehouses Throughout America
BELOIT, WISCONSIN

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More and more teachers are becoming aware of the growing need for 10-key touch operation of figuring machines. Now a new, ten period, adding machine course, made available by Remington Rand, helps toward easier and more effective teaching of this preferred method.

Never before has such a complete course been prepared and offered to teachers of 10-key adding machine operation. Look at all it includes: student's manual, student's handbook, instructors guide, exercise sets of checks, check stubs and invoices, a wall chart for the classroom, and distinctive certificates of proficiency for students you qualify. What's more Remington Rand is ready to assist by counsel in every way towards the establishment of your 10-key touch teaching program.

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SEND FOR THIS DESCRIPTIVE FOLDER

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What's New . . .

Silent Mopmaster

A new line of equipment, known as the White Silent Cleaning Equipment, has been especially developed for use in institutions where quietness is essential. The Silent Oval Bucket is insulated against noise. It is equipped with a friction bail which is covered with a rubber grip at point of contact with bucket rim. The bucket base rim is completely fitted with a long wearing rubber guard.

The Silent Mopmaster outfit consists of two Silent Oval Buckets on a heavy steel truck mounted on 3 inch rubber casters. One bucket is designed for cleaning solution and the other has the sturdy "Can't Splash" Squeezer and contains rinse water. The cart handle is bumpered with rubber to eliminate noise when slamming against the bucket and the corners of the cart have rubber bumpers. Silent operation is an added feature of this efficient double mopping outfit. **White Mop Wringer Co., Dept. CUB, Fultonville, N. Y. (Key No. 430)**

Sloane Thriftwall

Developed to meet the demand for an inexpensive, washable wall covering, Sloane Thriftwall consists of a durable enamel applied to a backing of sturdy, saturated felt. It has a glossy smooth, easy-to-clean, alkali-resistant surface printed with bright colors that retain their beauty. It is easy to cut and handle and highly flexible.

All Thriftwall patterns are made with a cap and feature strip at the top, giving a finished effect with one operation. The cap strips are of solid color, contrasting with the softly colored marbleization of the tiles. The wall covering is easily installed and comes in rolls 54 inches wide. **Sloane-Delaware Floor Products, Dept. CUB, Trenton, N. J. (Key No. 431)**

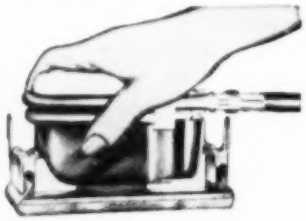
Tape Recorder

Designed to fulfill special requirements for use in educational institutions, the new RCA Tape Recorder features simple push-button operation and easy threading of tape. The machine can be operated at either of two speeds and does not require technical training for use. Up to two hours can be recorded or played back on a single reel of tape which is rewound in less than three minutes. All sizes of tape reels up to 7 inches in diameter can be used on the machine.

A plug-in type microphone and a jack permit easy recording from phonographs, radio receivers and public address systems as well as original recordings. The unit can be used for instrutcion and entertainment, and to preserve a sound record of graduation ceremonies, special classes and other events. It is a compact unit, ruggedly constructed and packaged in a luggage carrying-case. **RCA Victor Division, Radio Corporation of America, Dept. CUB, Camden, N. J. (Key No. 432)**

Air Sander

A small, light air sander is now available for woodworking and maintenance use. The Model J-R air-powered Detroit Easy Finisher has a small palm-sized grip for maximum operator comfort and



an air switch type control. It is easy to use the abrasive holder for attaching several sheets of sand paper at one loading and it has the No-Surge automatic mist-type water spray for wet sanding. The machine offers fast cutting and operates with the same Strate-Line reciprocating action of heavier Detroit models. A unique slide action design for attaching the pads allows off-center adjustment of the pad, permitting sanding in grooves up to protruding trim and other hard-to-reach areas. It also permits instant attaching of desired types of sanding pads to fit the job. **Detroit Sanding Machine Co., Dept. CUB, 1333 E. Eight Mile Rd., Detroit 20, Mich. (Key No. 433)**

Spirit Duplicator

Up to five colors can be printed on the new Conqueror Spirit Duplicator. It produces copies face up at high speed and is the result of two years of engineering research. The machine has a number of features which make it efficient in operation, easy to use and durable. The fluid supply is visible when filling and operating through the glass insert in the plated brass tank. Maximum runs are assured through the adjustable pressure control. The master is easily attached to the cylinder through the new master clamp, calibrated for centering any sized paper. The operator can instantly raise or lower copy on paper with the new control which has a range of six inches. The new large capacity rotary feed is designed for extended runs and the machine is engineered for perfect registration. **The Heyer Corp., Dept. CUB, 1850 S. Kostner Ave., Chicago 23. (Key No. 434)**

(Continued on page 108)

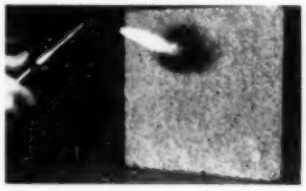
Windall Sills

Window sills that never need refinishing, are weather-safe, easy to maintain and easy to install are available in the newly developed Windall Sills. They are unaffected by heat, cold, sun, rain and condensation and do not spot. The heavy-bonded Formica surface is unharmed by alcohol, fruit acids, boiling water and ordinary cleaning alkalies. They are cleaned by wiping with a damp cloth. Windall Sills are available in dark walnut, limed oak, marble, Gray Fernglo and Buff Fernglo finishes. **Woodall Industries, Inc., Cleveland Div., Dept. CUB, 1890 Carter Rd., Cleveland 13, Ohio. (Key No. 435)**

Insulating Roof Deck

A new building material for roofs on schools and other institutions and industrial plants is being provided in Tectum. Made from wood fibers bonded together with a thermal setting inorganic cement, the product is structurally strong and does not burn, rot, weaken with age or encourage termites. It is light in weight and offers good insulating quality, is not affected by changes in humidity and temperature, and provides good acoustical treatment. It has passed Underwriters' Laboratories tests for incombustibility, according to the manufacturer.

The material can be sawed, chopped, nailed or drilled and makes an effective and economical roof deck. The insulating qualities make the Tectum roof deck effect fuel savings by reducing heat losses. At the same time, power costs are saved in air conditioned areas. Tectum roof plank is tongue and grooved on two sides and the plank has a factory



applied waterproof roofers' felt on the top surface. **Tectum Corporation, Dept. CUB, 105 S. Sixth St., Newark, Ohio. (Key No. 436)**

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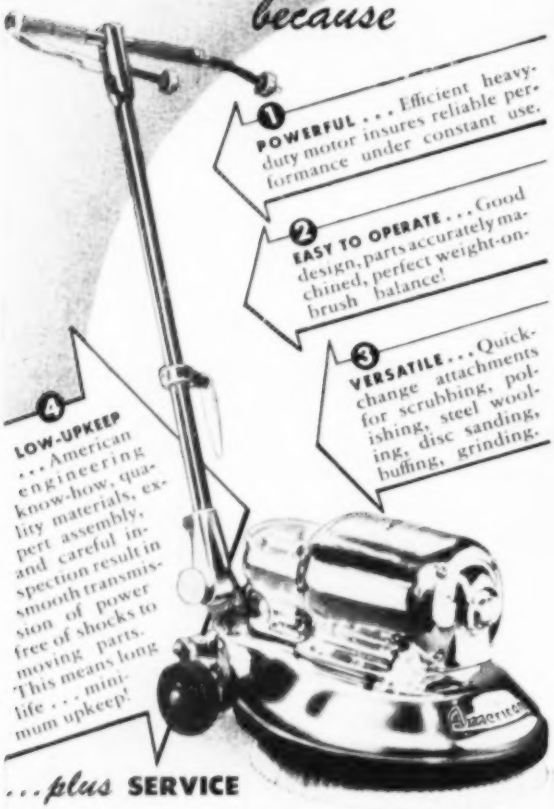

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EST. 1826

The ORIGINAL Tubular Steel School Furniture

Heywood Furniture adds to unusual flexibility of new

COOK COUNTY HIGH SCHOOL

The Cook County High School in Grand Marais, Minnesota, provides high school facilities for the entire county and a community center, too. Its skillfully designed modern interior furnished with adaptable Heywood furniture encourages maximum use of the school program. In this functional room which serves as study hall and library, S 819 Movable Tablet Arm Chairs provide ample surface for study and reference work. Note the folding doors which can be drawn, dividing the room into three work areas; lightweight furniture can then be rearranged for smaller classes.

Shown here is one of the three closed-off areas utilizing Heywood-Wakefield S 915 All-Purpose Chairs and S 967 Plastic Top Tables arranged for group study and project building.

Supervising Superintendent was Gordon D. Ose, Architect, Myron M. Kehne, St. Paul, Minnesota. Tubular Steel Furniture was installed by Farnham Stationery and School Supply Co., Minneapolis, Minnesota, Heywood-Wakefield distributors. For further information on our Tubular Steel School Furniture, write for free illustrated catalogue. Heywood-Wakefield, School Furniture Division, Menominee, Mich.—Gardner, Mass.

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September, 1953

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What's New . . .

Product Literature

• **"1953-54 Recipes & Menus"** is the title of a carefully planned and prepared booklet on the Type A School Feeding Program, written by Isabelle N. Peterson, Dietitian, for John Sexton & Co., P. O. Box JS, Chicago 90. The booklet has been prepared as a guide and aid to the lunch room manager and contains menus, with recipes, for the entire school year, as well as a complete set of evaluation and food cost charts. The menus are designed to follow the standard for Type "A" lunches by providing one-third to one-half the daily food essentials for pupils, as set up by the Production and Marketing Administion, U.S.D.A. The booklet is indexed for quick reference. **(Key No. 437)**

• Special attention to the cleaning problems in colleges and other institutions is given in the new 8 page **Bulletin No. 121-B** entitled **"Commercial Stationary Vacuum Cleaning"** issued by The Spencer Turbine Co., Hartford, Conn. Recent advances in the special vacuum equipment for picking up water, cleaning dry mops, boiler tubes, venetian blinds and all types of machinery are described, together with an outline of the special vacuum tools for these purposes. **(Key No. 438)**

• A new chart explaining how to determine whether the master has been properly prepared for duplicating is offered by Old Town Corporation, 750 Pacific St., Brooklyn 38, N. Y. Entitled **"How to Make Perfect Masters for Spirit Duplicating,"** the chart offers helpful information on how to type the master to get perfect copies and gives detailed information on correcting masters. The chart is printed on bristol board and also works as a backing sheet. **(Key No. 439)**

• A folder on **Bookote,** the transparent liquid plastic book coating to preserve new books and protect all books from wear, moisture and soil, is available from Delkote, Inc., Box 1335, Wilmington 99, Del. Information on the value of Bookote for library books as well as for student and teacher books is discussed and illustrations supplement descriptive text showing how Brush Type Bookote and Spray Type Bookote are applied. **(Key No. 440)**

• Information on both ladder and rolling types of aluminum scaffolding is offered in a new folder published by The Patent Scaffolding Co., Inc., 38-21 12th St., Long Island City 1, N. Y. **Bulletin AS-2** gives specifications and illustrations of some of the structures possible with the various sections of aluminum scaffolding, pictures of actual installations, and general information on the handling and safety features of this equipment. **(Key No. 441)**

• **"The Cooperative Plan of Engineering Education"** is the title of a booklet published by Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis 8, Minn. The booklet discusses the cooperative program which the company is currently carrying on with the Universities of Minnesota, Northwestern, Marquette and Antioch. It combines actual experience in research and production with the study of the theory of engineering. **(Key No. 442)**

• Standard Penetrating Sealer and Standard Super Finish for gymnasium floors are two products of the Standard Oil Company (Indiana), 910 S. Michigan Ave., Chicago 80, discussed in the recently released **Technical Letter No. X-425.** What the products do, general information on them, and technical data and specific instructions on the use of the products on new and old surfaces are covered in the 8 page leaflet. **(Key No. 443)**

• The story of **"Vinylized Azphlex, a New Concept in Greaseproof Flooring,"** is told in a leaflet issued by Uvalde Rock Asphalt Co., P. O. Box 531, San Antonio 6, Texas. Color reproductions of the tile are shown together with illustrations showing it in use. Descriptive information and specifications make the folder a handy reference source. **(Key No. 444)**

• **Castaloy Laboratory Appliances** are discussed in a booklet published by Fisher Scientific Company, 717 Forbes St., Pittsburgh 19, Pa. The booklet is artistically laid out with illustrations and text well balanced on each page. The information provided is complete yet concise. **(Key No. 445)**

• How charts, graphs and statistical reports can be given added life and interest by the use of Chart-Pak material is told in a folder issued by Chart-Pak, Inc., 104 Lincoln Ave., Stamford, Conn. With the **Chart-Pak system** anyone can make charts quickly and easily with Chart-Pak bar and line tapes in a variety of patterns, including Pictograph symbols. The prefabricated charting material on pressure sensitive tapes is explained fully in the folder which illustrates the simplicity of the method. **(Key No. 446)**

• The new "66" series of National Gas Boilers for institutional applications is described and illustrated in **Catalog No. 607** issued by the National Radiator Co., Johnstown, Pa. Drawings of control systems for both hot water and steam installations, tables covering boiler horsepower, I-B-R ratings and A.G.A. input and output ratings for natural, mixed and manufactured gas and automatic controls furnished with the cast iron boilers are presented in the 6 page catalog. **(Key No. 447)**

• Applications of the **American ALM-13 floor maintenance machines** are shown through a series of on-the-job action photographs in a new 4 page catalog issued by American Floor Surfacing Machine Co., 518 S. St. Clair St., Toledo 3, Ohio. The ALM-13 is an economy machine for smaller areas and provides dependable performance for a wide range of operations on all types of floors. Specifications and other technical data are included in the new catalog. **(Key No. 448)**

• A new 48 page **Sanitation Products Catalog** has recently been published by Huntington Laboratories, Inc., Huntington, Ind. Complete information on each product manufactured by the company for sanitation and maintenance, and data on the company's laboratory research and product control procedures are included in the new catalog. **(Key No. 449)**

• **"Popular Year-Round Turkey Recipes"** for institutions are given in a new booklet issued by the National Turkey Federation, Mount Morris, Ill. The 16 page booklet discusses turkey as "a holiday meat in everyday demand" and offers many helpful suggestions for menu variations. **(Key No. 450)**

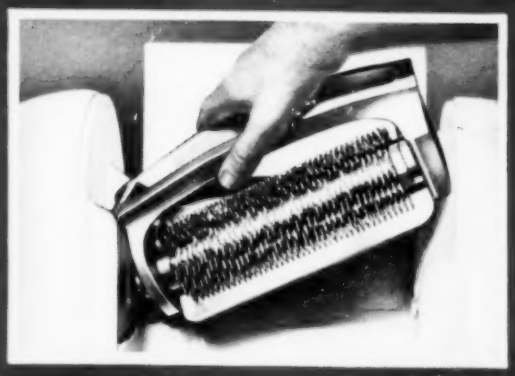
• The American Dietetic Association, 620 N. Michigan Ave., Chicago 11, has released a new booklet intended for the college student who is considering a year's internship in dietetics. Entitled **"A Dietetic Internship,"** the booklet states a number of questions that may be in the mind of a student and gives the answers. **(Key No. 451)**

• An attractive, plastic-bound catalog of **"Mid-Century" Library Equipment** has recently been issued by Myrtle Desk Co., High Point, N. C. Detailed information on the complete line of library equipment in oak or maple offered by this manufacturer is given in the 64 page catalog. Illustrations of each item in the line are supplemented by detailed descriptive information and illustrations of actual installations. A separate folder gives detailed specifications. **(Key No. 452)**

• Many newly introduced instruments and equipment for research, development and control laboratories are illustrated and described in the new 16 page **catalog of apparatus and equipment** released by Schaar & Co., 754 W. Lexington St., Chicago 7. **(Key No. 453)**

Suppliers' News

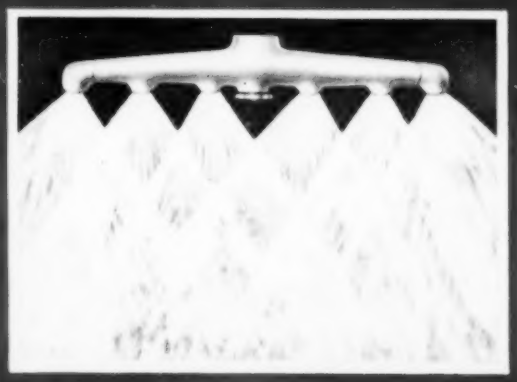
Allied Radio Corporation, manufacturer of radio, phonograph and intercommunication equipment, parts and educational kits, announces removal of its offices from **833 W. Jackson Blvd., Chicago 7,** to a new plant at **100 N. Western Ave., Chicago 80.**



• FINEST TENDERIZING ACTION on the market, with *stainless steel* Knit-Knife blades in easily-cleaned lift-out unit—that's the Model 400 Steakmaster. It knits and blends as it tenderizes. Ideal for delicious, low-cost specialties. Two models.

• HOBART PLANETARY ACTION, coupled with plus-power (Hobart motors) and positive speeds, gives you thorough, exact mixing that's true to the formula every time. There's a complete range of sizes—9 models from 5 to 140 qts.—with a full line of attachments for auxiliary work.

• HOBART STAY-SHARP solid stainless concave knives mean years of trouble-free service from all 3 Hobart slicers. See the advanced safety features—design free of any crevices—design preventing lodging of juices or food. Entire machine quickly cleaned without tools.



• EITHER THE WATER-PATTERN, OR THE DISHES, OR BOTH MUST MOVE, for thorough sanitization. Every one of the 25 automatic and semi-automatic Hobart models follows this essential principle—featuring Hobart revolving wash, dual-drive or Flight-type conveyor systems.

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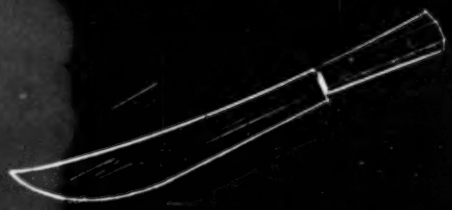

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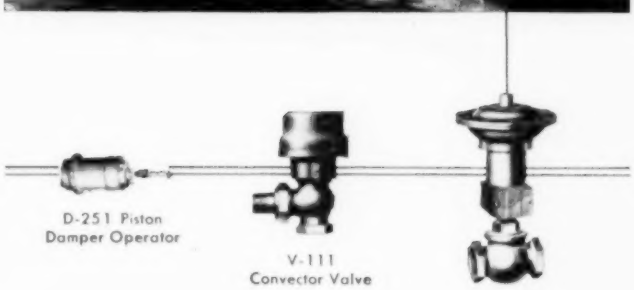
University of New Mexico, Albuquerque, New Mexico.
Meem-Zehner-Holein and Associates, architects, Santa Fe, N.M.

Colleges and universities across the nation entrust their control problems to Johnson, simply because they know that the nationwide staff of Johnson engineers are superbly qualified by education, training and experience to solve those problems. They also know that Johnson takes pride in making each assigned project, large or small, "a job well done."

The buildings on the campus of the University of New Mexico at Albuquerque are an excellent example of this trust in Johnson apparatus and Johnson engineering skill. The first installation at New Mexico was made in Hodgin Hall 20 years ago, when the building was over 40 years old. Additional Johnson systems were provided through the years until, today, *all* campus buildings are equipped with Johnson Control of one type or another. Some buildings are equipped with Johnson *Dual* Thermostats in each *individual room*, so that only those rooms which are in use are heated.

Regardless of the temperature regulation problems encountered—convectors, radiators or radiant panels for dormitories and living quarters, combination systems of convectors and central plant ventilation or straight blast heating in classroom and administration buildings—Johnson Control is the answer.

Whether your temperature control problems are intricate or involve merely a simple arrangement of thermostats to operate valves and damper operators, talk with a Johnson engineer from a nearby Branch Office. There is no obligation. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.



D-251 Piston Damper Operator

V-111 Convector Valve

V-103 Coil Valve

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